The Orchadian

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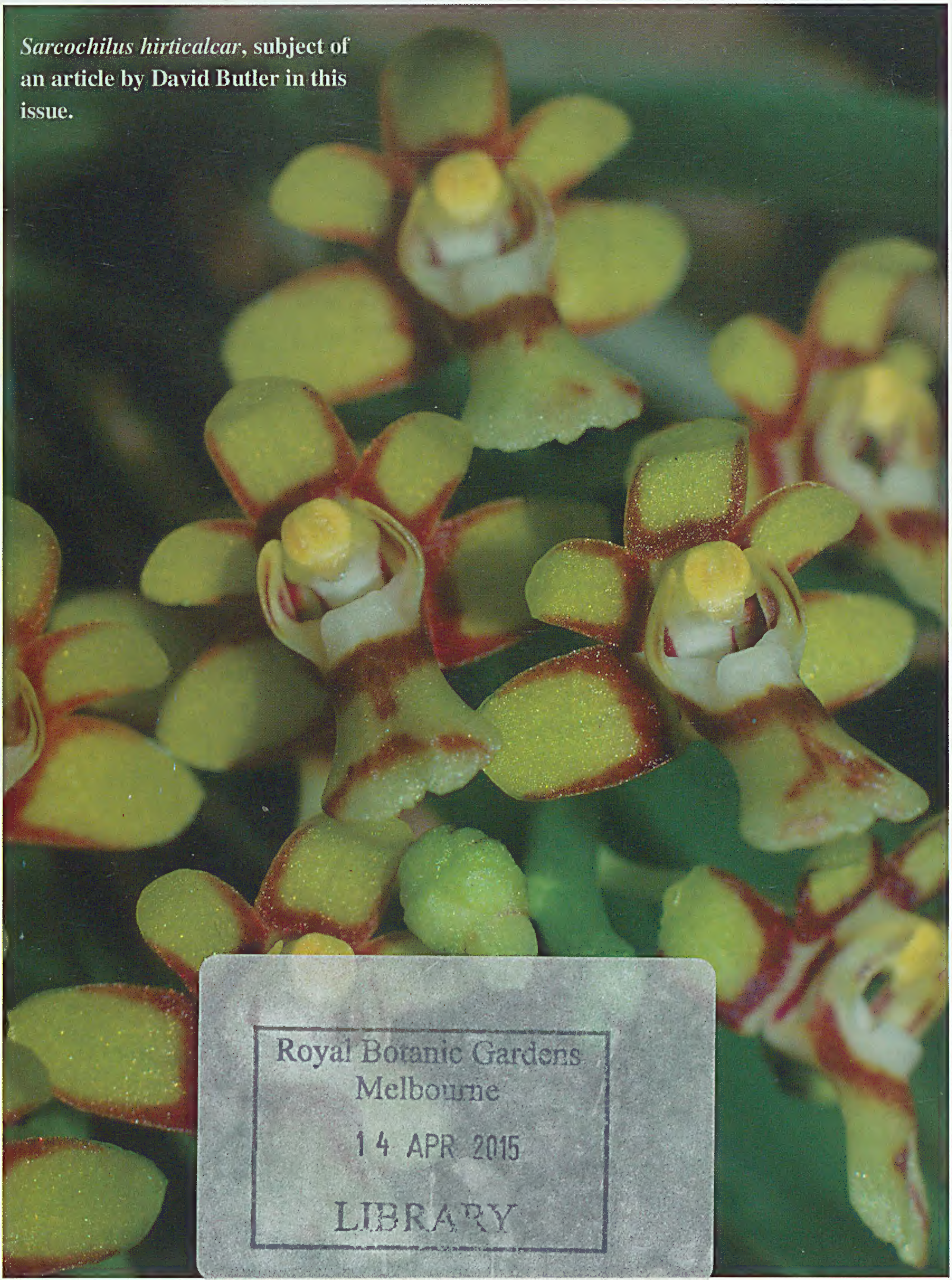
Official Journal of the Australasian Native Orchid Society



Sarcochilus hirticalcar, subject of an article by David Butler in this issue.

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The Orchadian

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Anne-Maree Mitford
anne-maree.mitford@exemail.com.au

Ira Butler Chair

Alan Stephenson

Webmaster

Rick Winch
rickwinch@westnet.com.au

ANOS Correspondence

A.N.O.S. Inc., PO Box 2088
Keperra QLD 4054

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Good quality sharp illustrations or colour digital images should be submitted as separate files, with nominated location identified by place-holders in the text. Images of less than 3 megapixels should be avoided where possible. The editor is responsible for final selection of pictures.

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Editorial

In this issue I have brought together a wide range of different items that hopefully will be of interest to you the reader. Discussions of walks, growing notes, tours, growing and protecting plants and a report of a conservation project can all be found within these pages.

We lost one of the prominent breeders recently, with the passing of Brian Gerhard of Down Under Native Orchids. Vale Brian. His work will continue to grace our shows, and we should take the opportunity to quietly thank him for the more recent lines to come from the stable and the beauty they bring to our benches at show time.

From the highland areas of southeastern Queensland and The Rock in the NSW Riverina come reports of tours and travels in some of the inland forests. These areas are rich with terrestrials and a wide array has been presented in the articles.

Council is providing members the opportunity to travel in guided comfort in north Queensland with the first tour event. It is hoped that should there be enough interest it may become a regular thing. It will be open only to members of ANOS, although opportunities may arise for non-members to become members to participate.

Plectorrhiza is a genus with few species but wide appeal and distribution. It is also getting more interest in hybridising and has produced a range of novelty colours in some of the small growing Sarcanthinae hybrids. The article penned by Jim Brydie of Sydney presents an overview of these species.

Alan Stephenson presents yet another little gem from the south coast of NSW, with a note regarding the recent discovery and confirmation of the terrestrial *Acianthella amplexicaulis* well and truly south of previous records. It flags again that the value of native orchid people when travelling is to record and report the species found.

Also provided is notification of the annual *Dendrobium speciosum* Spectacular in Kempsey. This is a great show in the first weekend of September and is also the weekend when the Annual General Meeting of ANOS Council is held (on the Saturday afternoon at the West Kempsey Bowling Club).

A couple of short articles from the Newcastle area include a simple grasshopper trap and a how-to from the ANOS president on getting germination of seeds in a symbiotic manner. If you only want a few plants this can be a good way to get some new babies without going through the rigmarole of flasking.

David Butler has provided an article on the influence of *Sarcochilus hirticalcar* in breeding he has undertaken. This is a prominent parent in the heritage of the highly coloured sarcs we now se, and its influence has extended to widening the flowering season too.

Wally Heath has great success with growing the Queensland Floral Emblem—the Cooktown Orchid—in coastal Western Australia not far south of Perth. He describes his growing conditions and illustrates the success he has with a few of his lovely plants.

Rounding out the articles is a short piece from Bill Dobson on one of the more gorgeous clones of Dendrobium speciosum var. grandiflorum 'Katrina' (below). It certainly is a sight to behold.

Enjoy the time spent reading through this issue.

Greg Steenbeeke

President's Report

While we all like to see articles and photos on orchids in The Orchadian, I feel it important to acknowledge special people in this organisation and all the A.N.O.S. groups. Those that improve and make them strong are very important. If groups have such people and would like them acknowledged in The Orchadian please let me know.

One such special person is Fred Fear who was awarded life membership at the Newcastle A.N.O.S. group Christmas party. I think the biggest compliment I could make about Fred are the words "honest" and "conscientious" and this is probably why he is also one of the best orchid growers I have known. Congratulations Fred.

I recently assisted at a Bunnings "sausage sizzle" for the Newcastle group, this is an excellent way to raise money for organisations such as ours. This proved to be quite profitable for the group, what was just as encouraging was the support from members to run it. Any groups thinking of holding such an event can contact me for advise and cost saving.

With the warm weather and plentiful rain I have been getting the best growth in my orchids for many years. I feel that my fungicide programme has allowed this to happen(I spray about every two months). Since retiring I have repotted most of my orchids and feel that the New Zealand bark is superior to what I was using before.

The Orchadian continues in popularity, this is shown by a steady increase of members/ subscribers. At recent meetings in Sydney and Newcastle I have been approached by people inquiring about subscribing, they have been impressed by the standard of articles and photos. Just this week I received an email (courtesy David Butler) from Jean Allen-Ikeson from Dundas, Toronto in Canada, Jean said she had been experiencing difficulties in renewing her subscription through internet problems and went on to say "I love The Orchadian". Jean is considered to be knowledgeable on Sarcochilus in Canada/North America and in 2011 published an excellent booklet called "*Sarcochilus* species and hybrids".)

I congratulate Greg, our editor for a job well done and well done to all those native orchid lovers who have submitted articles, please keep sending those articles in.

I am particularly interested in the habitat and how people grow those difficult-to-grow orchids (for me) such as *Sarcochilus ceciliae* and *S. hillii*, *Plectorrhiza erecta* and *P. brevillabris*, *Liparis* species and would love to see photos of tropical Queensland shows with their amazing colours and forms in *Dendrobium* section *Ceratobium* and all those other gems we rarely see down here.

Hope you are enjoying your Australian native orchids as much as me.

Cairns – Cooktown Native Orchid Tour 2015

John Zietsch

As part of an effort to increase the benefit of ANOS membership, ANOS Council is planning to arrange a number of native orchid orientated tours throughout Australia and possibly into the Australasian region. These tours will have an emphasis on native orchids but will also include traditional tourist type activities and allow free time for participants to do their own thing.

To enhance the tours it is hoped that an expert native orchid guide with knowledge of the local environment will accompany the tour party. In this way participants may gain a better understanding of the orchids of the region.

The first of these tours is a 7 night / 8 day trip in the Cairns – Cooktown region of Northern Queensland commencing 15th July 2015.

A variety of native orchid habitats will be visited, including

- Lake Barrine and the Curtain Fig
- Lake Tinaroo Perimeter Rd and Tinaroo Hills Dr
- Mt Lewis rainforest drive
- Mossman Gorge
- Jindalba or Marrdjar boardwalk
- Coast road through Cape Tribulation to Bloomfield Falls then on to Cooktown

The tour will also take in several nurseries including Orchids North and the private collection of the tour guide.

Other places of interest will include Kuranda markets and ride the skyrail back down the mountain, Daintree Discovery centre, Cooktown Museum and Botanic Gardens and the Laura Split Rock art site.

Overnight stays in Cairns, Atherton, Port Douglas or Mossman, Cape Tribulation or Cow Bay area and Cooktown will be in comfortable motel style accommodation. Breakfast and dinner each day with lunches, when visiting bush locations, will be included in tour costs.

The tour will be limited to a maximum of 20 participants who must be full or family members of ANOS. Non ANOS members are welcome to join the Society for a subscription fee of $50.00 which includes 1 years subscription to *the Orchadian*.

Full details of the proposed itinerary are available on the ANOS website.

Expressions of interest in participating in the tour or further details and costs are available by contacting John Dougall at Casino Travel (ph 02 6662 6255), Ray Clement (02 6553 1012) or John Zietsch (02 6554 9733)

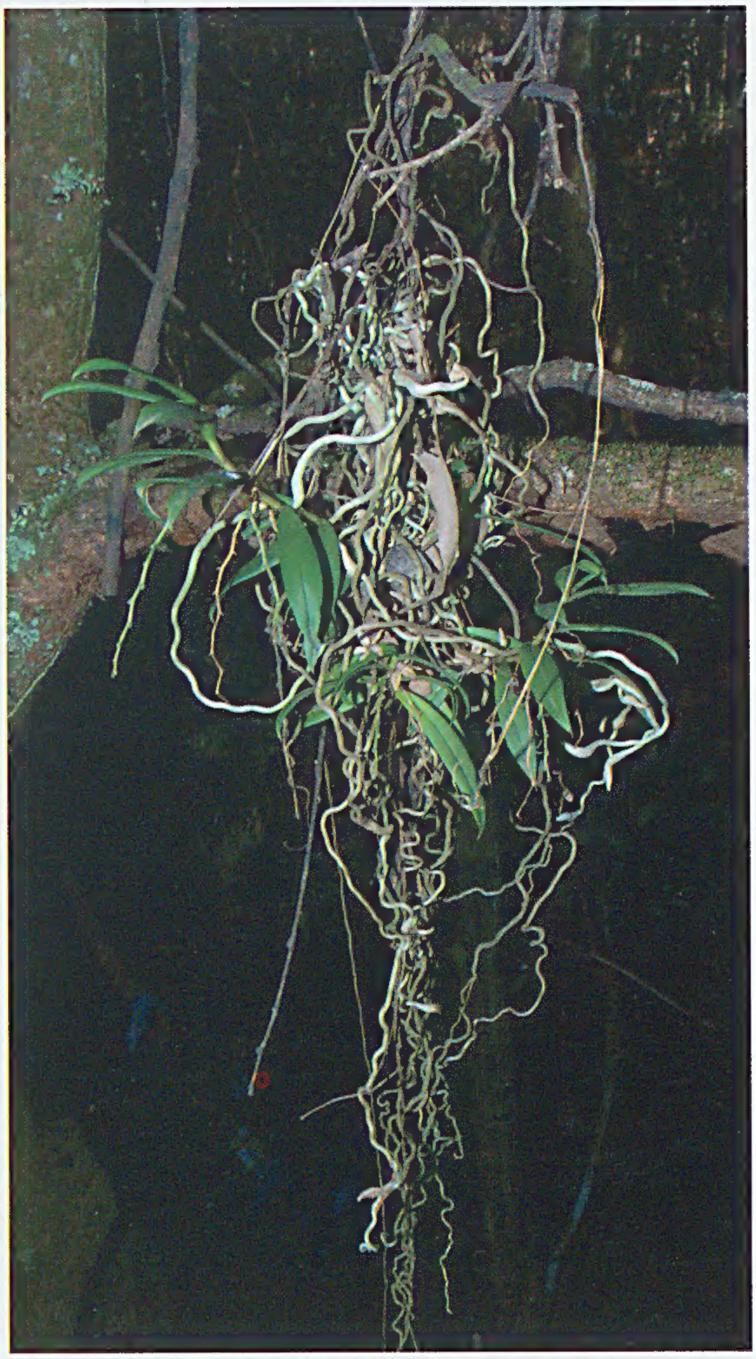
The Tangle Root Orchids

Jim Brydie

I don't recall the context, but at a recent meeting of the Ku-Ring-Gai Orchid Society there was mention of one of Sydney's most prolific epiphytic orchids – *Plectorrhiza tridentata* – otherwise known as the tangle root orchid. I thought at the time that many members didn't seem to know of it, so this is my attempt to give you a more detailed introduction to the species and its cousins.

There are only 3 species in the genus *Plectorrhiza*. Two species (*P. brevilabris* and *P. tridentata)* are endemic to mainland Australia, the third species (P. erecta) is endemic to Lord Howe Island.

Plectorrhiza brevilabris comes only from Qld, occurring from Cape York, down to a bit north of Brisbane. *Plectorrhiza tridentata* is more widespread, and ranges from just north of Cairns, all the way down to eastern Victoria, east of the Snowy River. This is the one we see in the wilds around Sydney.



Large *Plectorrhiza tridentata* in a gully in SW Sydney (photo by Greg Steenbeeke).

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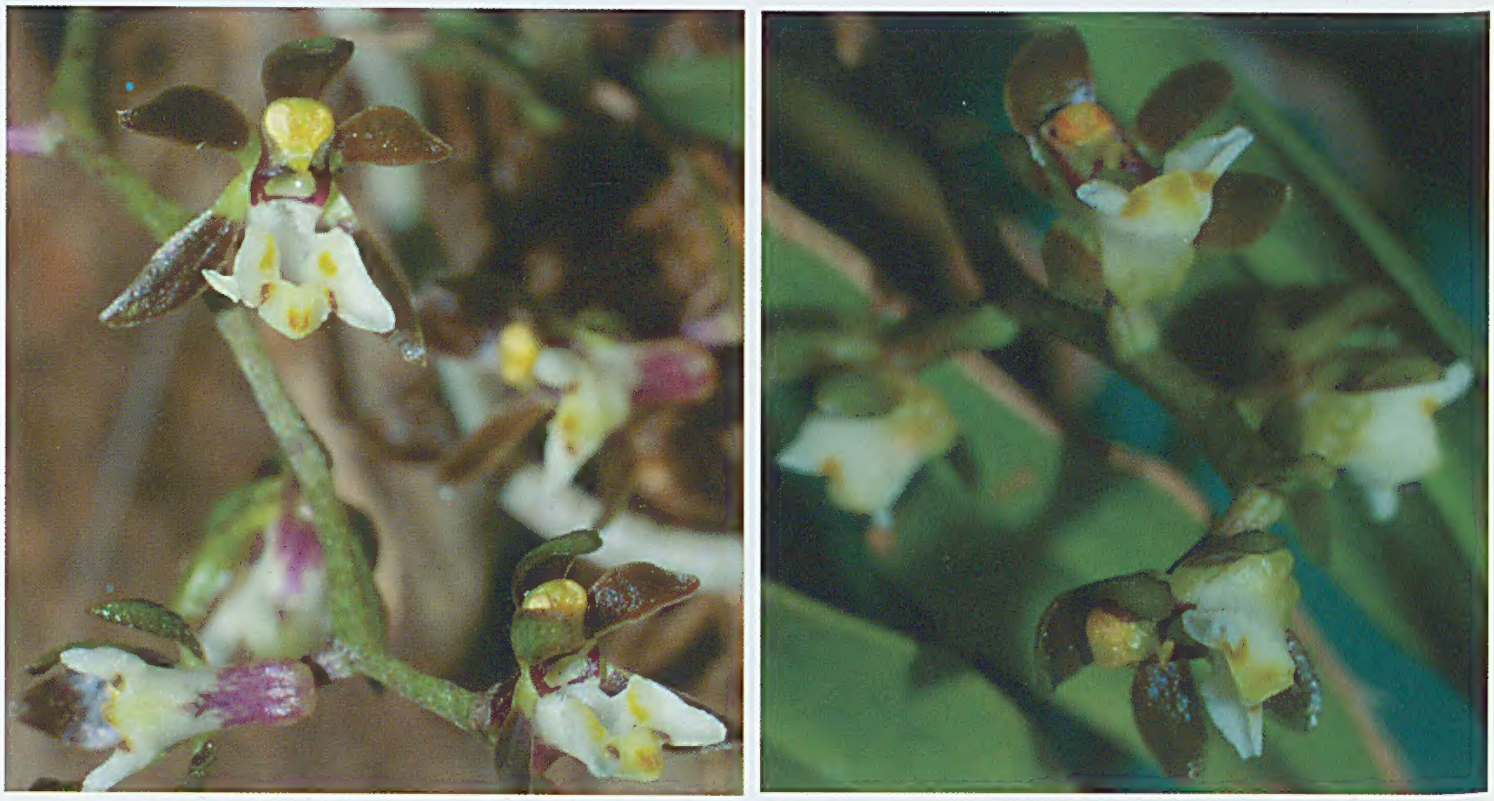
The genus name comes from the Greek *'plectos' meaning* plaited, or twisted and *'rhizos' meaning* root, and refers to the tangled roots which are a prominent feature of the two mainland species. These are pendulous epiphytes with lots of aerial roots that seem to grow in all directions, criss-crossing over each other and any

Photo of the clone 'Margaret' was taken by Bill Dobson at a judging of the Australian Native Orchid Society (ANOS) (above).

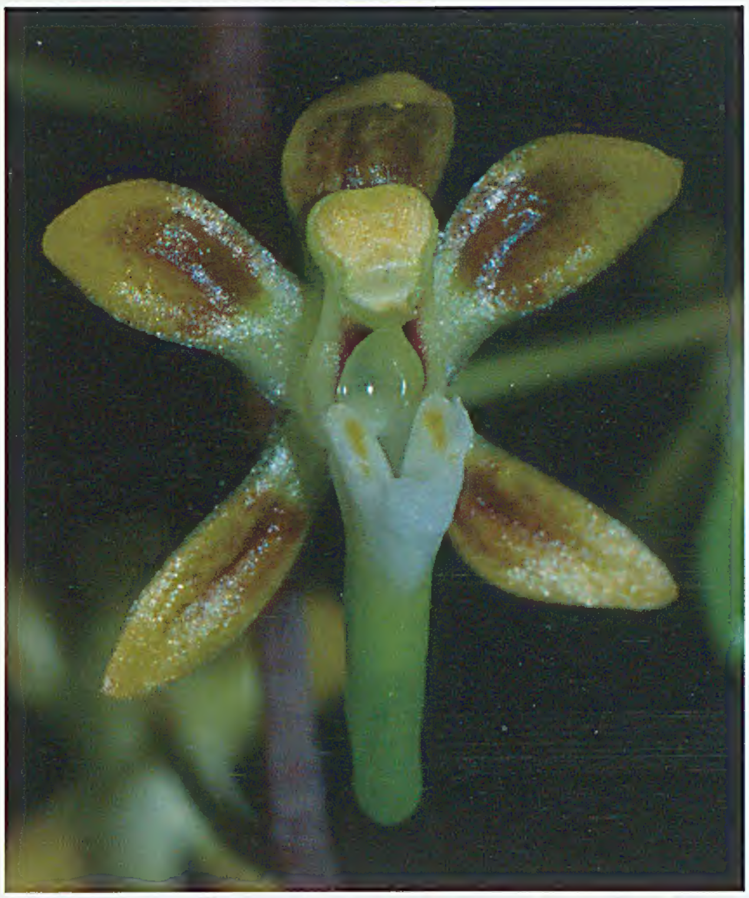
Cultivated *Plectorrhiza tridentata* plant in full flower (right).

nearby twigs or branches. Curiously, the third species, *P. erecta*, has a quite different habit, being upright and with fairly stiff, straight roots.

Plectorrhiza tridentata is a charming and widespread little orchid. It occurs in rainforests and wet sclerophyll forests but is also found in open woodland in shady, protected gullies and slopes. Many habitats are along streams, or close to flowing water, but it also grows in drier but humid locations. It grows on trees and on the outer twigs of rainforest trees, or scrubby trees in gullies. Plants can often be found dangling between branches, hanging on to a twig or a dead stick caught up between branches. Sometimes it hangs by just a single root with most of its other numerous roots just growing in the air and forming a



Plectorrhiza species' flowers— a brown-coloured *P.tridentata* (left) and *P. erecta* (right).



Plectorrhiza brevilabris (above)

Australian Orchid Foundation

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NSW Australia
Stephenson, Alan W. 2011

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tangled mass. I have seen *P. tridentata* growing in many of the national parks around Sydney, including Galston Gorge, and the renowned 25 km Benowie Trail which follows much of Berowra creek from Thornleigh to Berowra Waters. I don't recall ever sniffing the flowers but they are purported to have a pleasant, sweet perfume.

The pendent raceme can have up to about 15 small flowers (about 8mm diameter) which can be anything from apple green through to olive green to brown tones. In at least one northern area near Mackay there are reported to be colonies with deep chocolate brown flowers.

This is quite an easy orchid to grow and can make a lovely mass of growths and flowers after a while, like this fantastic specimen of Fred Fear's was awarded by ANOS in 2008 .

I have had a plant hanging in my shadehouse for more than 20 years, still dangling off the rotted remains of a piece of small branch it was on when I acquired it. It is nowhere near as good as Fred's but it still grows without complaint. It has fallen down a couple of times over the years when an old root it was hanging by has finally died, but it has never been a problem to string it up again onto a new piece of 'temporary' host. I suspect that the conditions in an orchid growers shadehouse very much suit this little gem. It hangs in a nice shaded environment, gets regular water and dilute fertiliser, and hopefully, plenty of air movement from fans. Mine has never talked to me but I hear it's thought whispers of 'thanks' when I walk past, and it also flowers for me every year in appreciation. It's only complaint might be my no sex in the shadehouse policy. It hasn't seen a pollinator since I got it.

References and acknowledgements

Taxonomy Research & Information Network (TRIN)

Orchids of Australia by John Riley and David Banks

Native Orchids of Australia by David Jones.

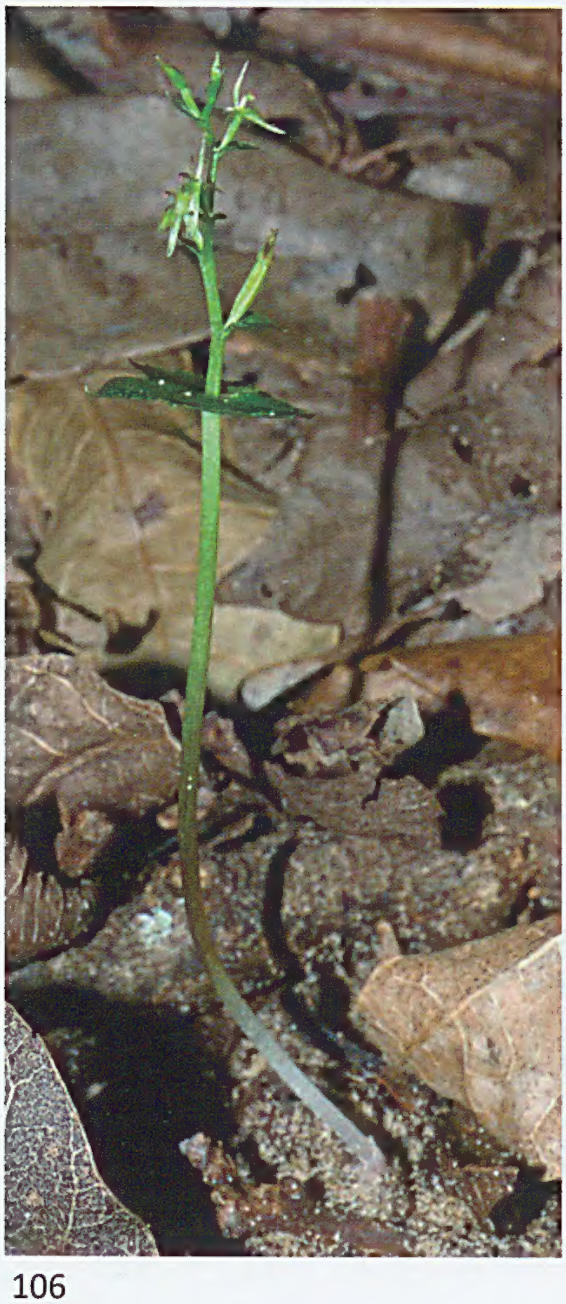
A Long Way from Home

Alan W. Stephenson (affine@tpg.com.au)

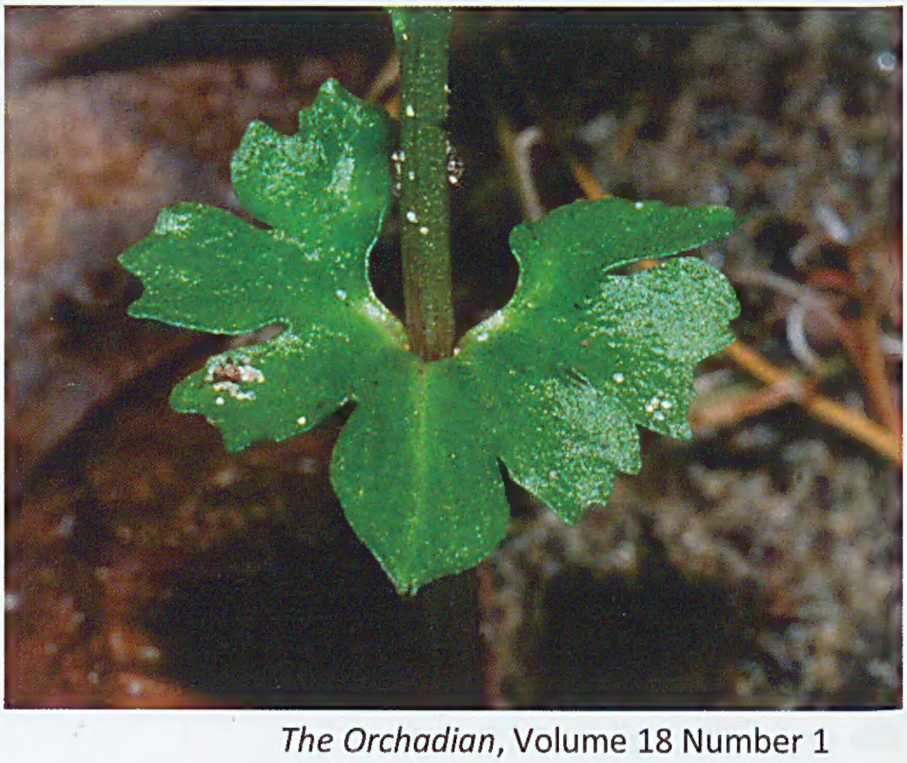
A couple of years ago I received an email (3-8-2011) containing several photos of flowering orchids along with two photos of a spent flower and leaf. The flowers were easily identified as *Pterostylis erecta*; however the leaf of the other species was one I had not seen before. It was similar to an *Acianthus* species but noticeably different in that the leaf was shaped like the clubs on a playing card.

I responded to the email asking for an inspection of the underside of the leaf and a day later the reply came back that the underside was a lighter shade of green than that of the top side. During this interval I did some homework and came to a few conclusions. The first was that the leaf was in some way deformed, although when I learned all four plants in the area exhibited the same shape and as they were not in close proximity to each other I made the assumption that a deformed leaf was not a strong possibility. The other conclusion was that the plant was something which had never been seen on the New South Wales south coast and if this was the case, more homework was required.

I arranged to meet the young man who found the mystery orchid which was a short drive north of my home in Nowra and in an area past which I regularly drive to meetings and shows held by ANOS Illawarra and fortunately out of the Shoalhaven area, as it would have been embarrassing to have a new species located just two months after my book was launched. The area is Littoral Rainforest, with a light infusion of *Eucalyptus botryoides* (Bangalay Trees) and the plants are at the northern extent of a national park. When I first viewed the leaves of the mystery plant it was a mystery no more. The homework I had done indicated that the orchid was an *Acianthella* species but as mentioned the flower was too far gone to identify and my lack of experience with this genus did not permit an educated guess.



Plant (left) and distinctive leaf (below) of *Acianthella amplexicaulis*.



The reason an *Acianthella* determination was not initially considered (a deformed leaf would have been more believable) was that this species was at the time at least 600 km out of its habitat as I understood it to be. There are two species of *Acianthella* and as one (*A. sublesta*) is known to occur on the Atherton Tableland at 700-1300 m ASL it was not seriously considered. However, the other species *A. amplexicaulis* (= *Acianthus amplexicaulis*) is listed as occurring from Eudlo (Qld) to Sullivans Gap, which is just over 10 km north of Bulahdelah and the stated habitat is rainforest, moist coastal scrubs and adjacent ranges among litter, in soil, from seal level to 600 m. I am a firm believer in the "never say never" principle as I have managed to locate a few species not considered to occur in my area but it is difficult to factor in a gap of 600 km.

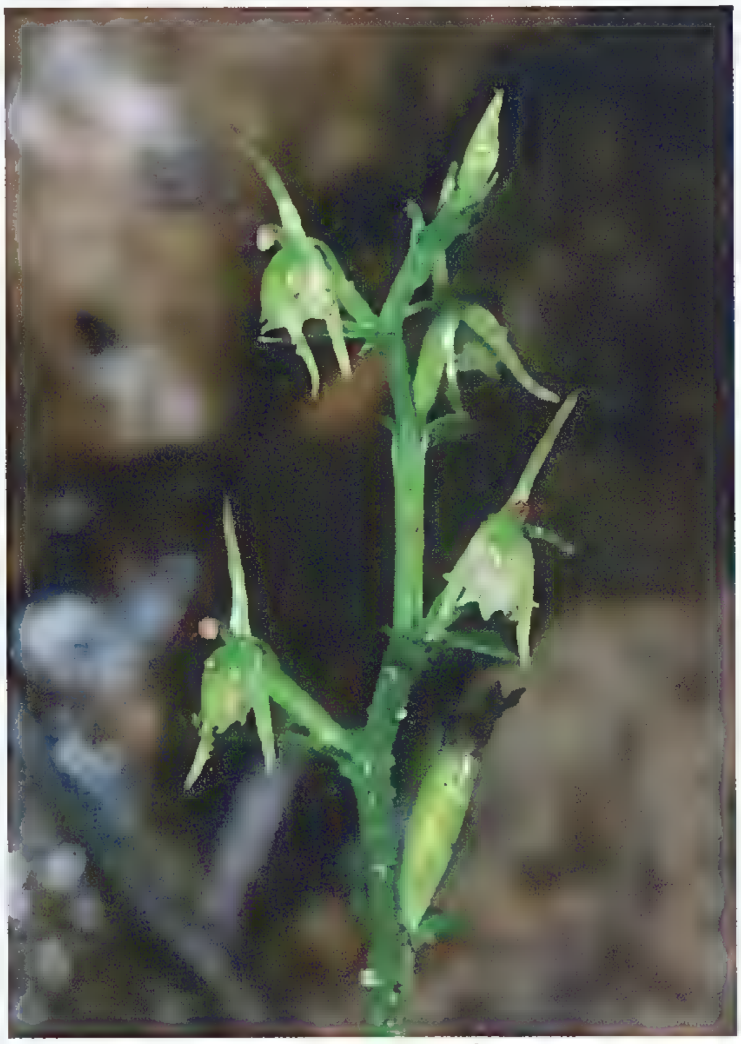
A good search of the area located no more than the already discovered four plants but did locate *Pterostylis oblonga*, *P. erecta*, *P. nutans*, *Acianthus fornicatus* and *Corybas fimbriatus*. None of this was a surprise but a thorough search will eventually be done over a greater area with more than one pair of eyes. The plants so far seen have all been on low sand hills three to four metres high with tree cover varying from heavy to medium shade but so far no plants have been found at ground level.

The plants were discovered by the leader of a team (Mathew) undertaking bush regeneration work and this includes weeding extensive areas of Lantana and the extremely dense coverage of *Asparagus* Fern, which for many years has infested this coastal strip.

Following the discovery I contacted Dr. Mark Clements to inform him of the find and to seek a scientific opinion of the leaves and I was pleased to receive the response that the correct identification had been made. As a result Mathew sent a sample to Canberra consisting of a leaf and deceased flower. The deceased flower was reconstituted in a laboratory and the result was surprising in that the species is positively an *Acianthella* but which species remained in doubt. The reconstitution went well but owing to the age of the flower, some segments failed to precisely match those of known *A. amplexicaulis* specimens. Fresh material was later supplied and a positive determination was made and I was pleased my original determination was correct. However shortly after this I learned there was a population just west of Gosford but still almost 250 km from this site. The position of the local plants is such that they are secure from normal foot traffic and as the site is known only to a few non-orchid people they should also be safe from any curious collectors. This year (2015) surveys are to be undertaken to properly determine the geographical extent and numbers of the population and later a nomination will be written for the population to be listed as endangered.

When the plant was first discovered I consulted my friend and local orchid authority, Leo Cady for information on the possibility of *A. amplexicaulis* occurring locally but it was not among his list of different things but it gives all of us some incentive to look more closely at those areas past which we drive so frequently.

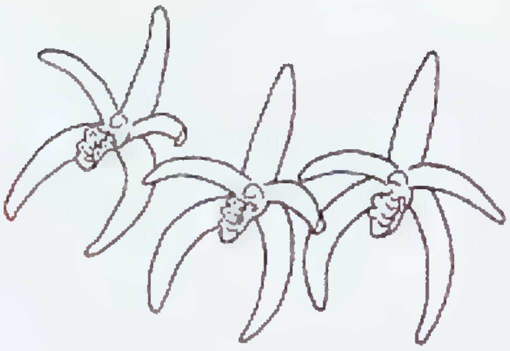
Raceme of *Acianthella amplexicaulis* (below)



DENDROBIUM SPECIOSUM SPECTACULAR & AUSTRALASIAN ORCHID SPECIES and HYBRID SHOW 2015

Kempsey, NSW

Ted & Winsome Walmsley and ANOS Mid North Coast Group.



Dates for this show, which provides an unparalleled opportunity to see some of the best speciosums in flower, are given below. Be sure to note in your diary and plan to be there. In addition to the wonderful plants on show, a range of top quality line bred plants will be for sale. All are welcome to exhibit and judging will be by an all ANOS panel. Monetary prizes and trophies will be awarded in a range of classes including species, hybrids and terrestrials.

Interstate entries are encouraged with a prize for the most travelled orchid.

Dates: Sat 5th Sept 10am to 4pm [Although closed for judging between 11am and 12noon this day]

Sun 6th Sept 9am to 2pm

Location: 57 Spooners Ave., Greenhill via Kempsey.

Details: Electronic copy of a brochure with locality map, show schedule and associated events is available by e-mailing John Zietsch at anosmidnorthcoast@hotmail.com.

OR contact Ted Walmsley on (02) 6562-7150 or John Zietsch on (02) 6554-9733.

eBay and *Dendrobium speciosum*

A number of members will have noticed that online auction company eBay has recently made the selling and buying of *Dendrobium speciosum* much more difficult. This relates to the recent listing of *D. speciosum* as a Noxious Weed in NSW, but not recognising that the listing as a noxious weed applies only to Lord Howe Island. Because this is politically part of NSW, it would seem that eBay has applied a blanket exclusion to any species listed on a noxious plants list in a particular jurisdiction. Because the jurisdictions used are states, parts of the state where the orchid (or other plant) are native are not treated as any different to where it is declared noxious.

On the upside, there are a large number of species where this will be in consideration. It includes the trees White Cedar (*Melia azedarach*) and Red Cedar (*Toona ciliata*), Silky Oak (*Grevillea robusta*) and a range of rainforest plants (*Pittosporum undulatum*, *Acmena smithii* and *A. hemilampra*, *Syzygium oleosum* and *Hymenosporum flavum*). It also applies to the

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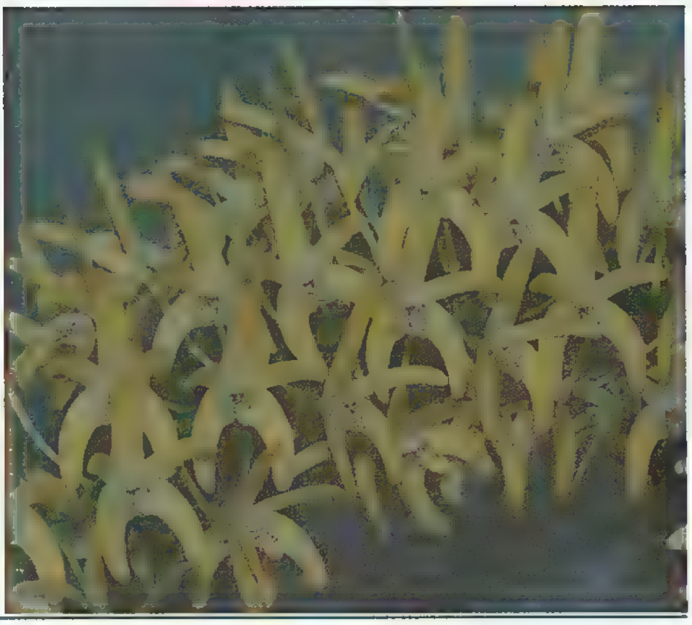
shrubs *Leptospermum laevigatum*, *Cassinia arcuata* and even plants such as Bracken Fern (*Pteridium esculentum*) and Bower Vine (*Pandorea jasminoides*). Some of these are definitely species widely used in horticulture so maybe others will also bring up this annoying situation and how it is an unnecessary restriction on legitimate trade.

Council has sent an email to eBay hoping to get a resolution to this so that it won't be a limitation on trade in future.

Greg Steenbeeke



It is with sadness that I report—to those who haven't yet heard—that the Australian Orchid Fraternity lost one of the more influential breeders, vendors and 'larger than life' people with the death of Brian Gerhard of Down Under Native Orchids. I asked Callyn Farrell, who grew up in the tutelage of Brian, to share with us some memories of one of his mentors.

Vale Brian.

Greg Steenbeeke, Editor

In memory of Brian Gerhard

Callyn Farrell

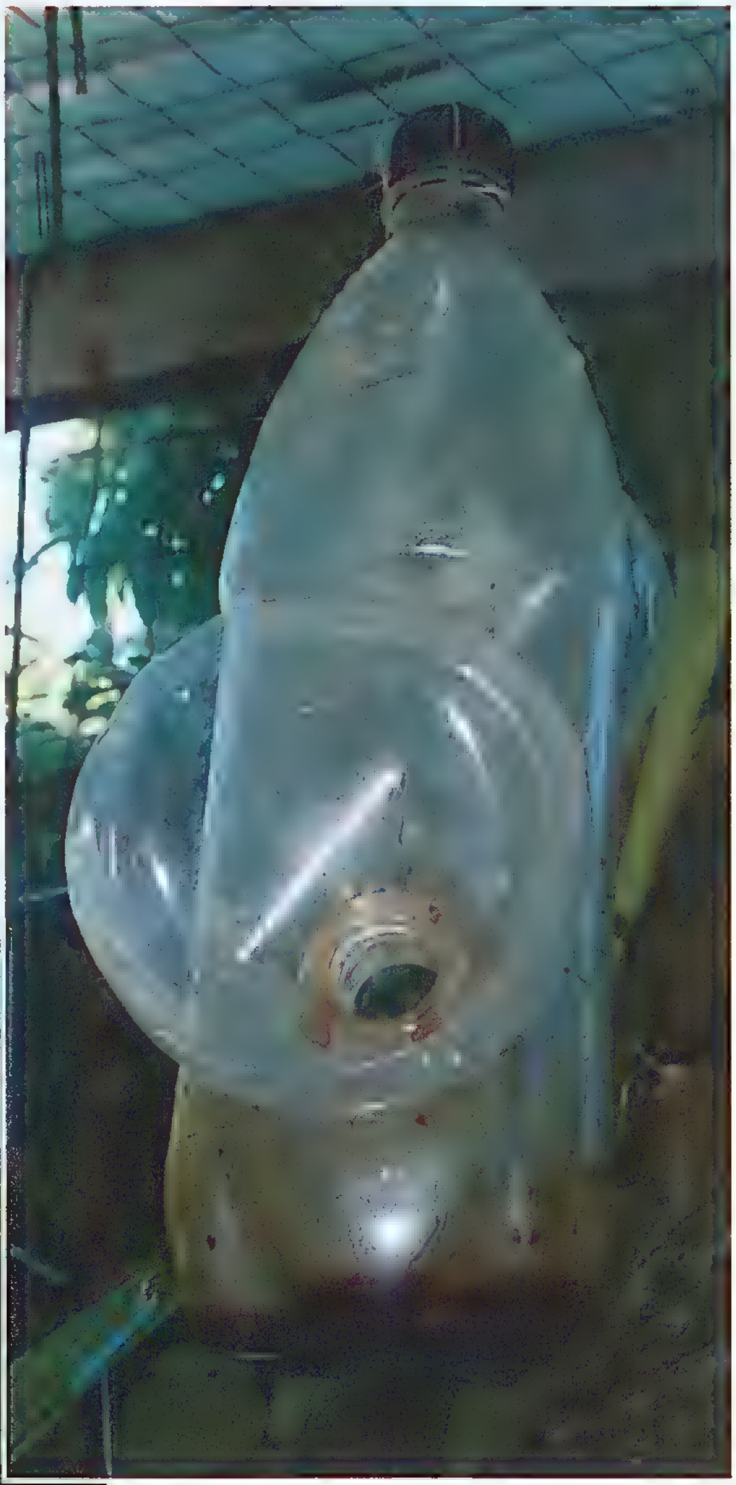
I first met Brian when I was just 9 years of age, such a bright soul larger than life. He knew I had a keen interest in orchids probably before I did myself. Over the coming years would develop a friendship that was both professional and personal. Brian always had such a positive outlook on life and always a good story or two to tell, he never failed to make those around him smile and laugh. Brian provided me with so much of his wisdom and knowledge over our decade together in relation to the hybridisation of Australasian native orchids and also to life in general. I remember one time I mentioned to Brian all I was achieving in the dance industry and he replied with "Some people just have all the luck don't they! Just make sure you keep a level head, son." As we all know Brian was a Vietnam veteran and served our country as a Qantas flight attendant before becoming a legend of Australia's orchid history, I think this vast range of life experiences is what made Brian such a colourful character. The auctions that he ran were always so entertaining, he could always manage to sell a plant and make everyone chuckle while doing so. Brian and I would sit and munch on Phena's scrumptious biscuits and talk about everything from orchids to politics and even when I moved to Victoria we still kept in touch via email every week and managed to both have biscuits in our possession. Even as I spoke to Brian in his last days of life he remained strong, a true fighter whose spirit and love for his family and friends was never beaten. Brian will be missed by all who knew him I personally think it is important for us as a community to continue his aspirations in the future of orchid hybridisation.

I will never forget the amazing times that made Brian a truly inspirational individual.

As he would say himself 'that's all for now folks!'

Grasshopper Trap

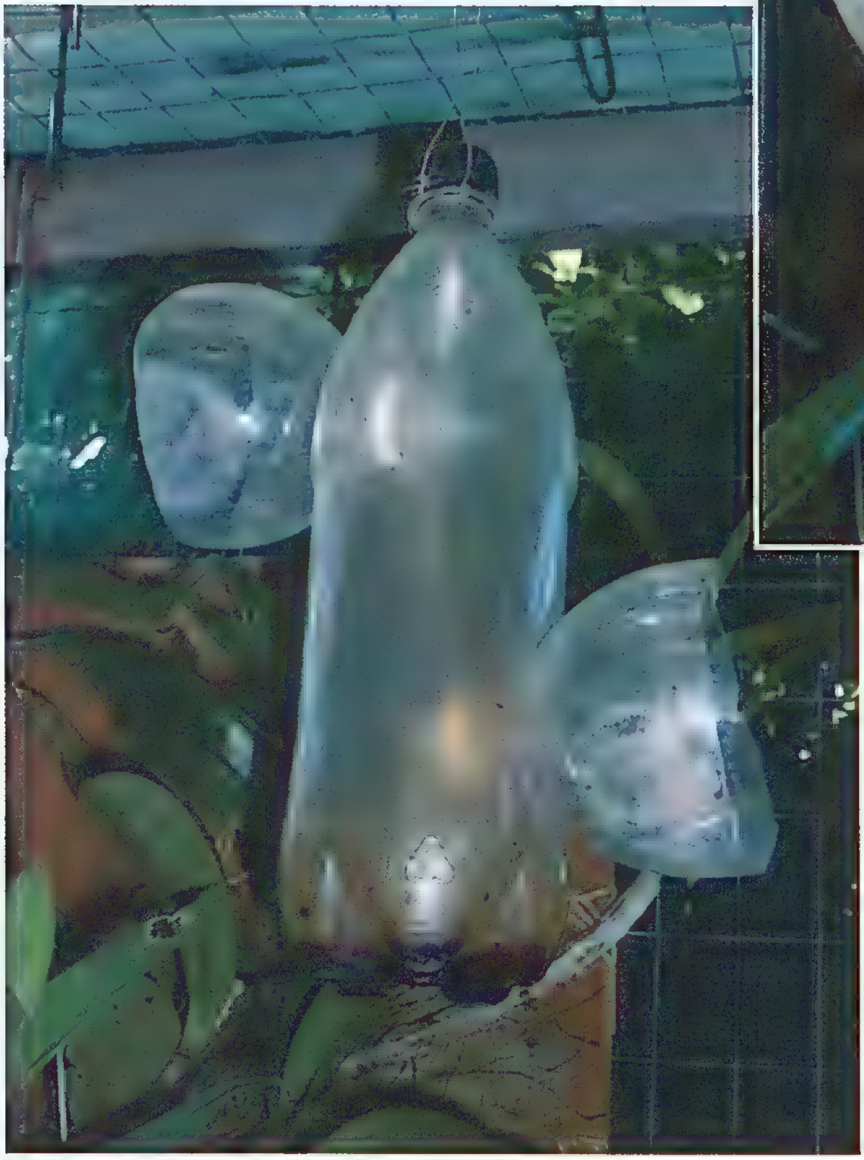
Ralph Lees, ANOS Central Coast



While in my orchid shade house I noticed that several new growths had been chewed off at the base of the plants so I knew that it was time to get the grasshopper trap into action.

As you can see from the photo the trap is made up of three soft drink bottles, one complete bottle and the necks of the other two. A cross is cut into two different places of the whole bottle so that the necks can be inserted and a wire attached for hanging purposes.

The bait is made up of approximate equal quantities of Vegemite, Peanut Butter and Honey mixed together and placed in the base of the bottle. The grasshoppers are attracted by the bait and enter the trap via the bottle necks and are unable to escape once inside. Once I set the trap it took less than 24 hours to catch two culprits.



Symbiotic germination of *Dendrobium kingianum* seed

Tony Clarke

I have often read of this method and as it is similar to the one that I have used to propagate ferns from spore (with mixed success) I decided to try it in spring.

As you are probably aware, orchid seedlings are unable to produce their own sugars and starches and rely on a fungus (mycorrhiza) to invade their roots. This is the symbiosis, as the fungus has a host and the orchid seedling has a source of sugars and starches (supplied by the fungus).

For my experiment I cross pollinated two different clones of *Dendrobium kingianum* in the spring and when the seed capsules matured I was ready. I chose two new 6" squat plastic pots and cleaned them in a bleach solution. I then raided the linen cupboard and borrowed the "newest, old" towel and cut off enough to cover the top of the pots and overhang 1" in circumference. The towelling was "sterilised" by boiling in water for approximately 8 minutes. The pots were filled 3/4 full with sphagnum moss and the towelling placed on top and tucked in around the full circumference of the pot.

Boiling water was then poured over the towelling and sphagnum.

Clear plastic was cut to cover and overlap the top of the pots and was placed immediately the sphagnum and towelling were in place.

I allowed the pots to cool overnight and the next day chopped up root tips (live and green) of some *D. kingianum* that I have in the backyard that are rarely sprayed with fungicide. This (hopefully) would supply the symbiotic fungus.

The seed and root tips were then sprinkled on the towelling. (A laminar flow cabinet or sterile aquarium were not used.)

The plastic was replaced immediately and tied off in place with wire (rubber bands perish in a short time and the plastic blows off).

The pots were placed in saucers of (non chlorinated) water and placed under the bottom shelf of the fernery.

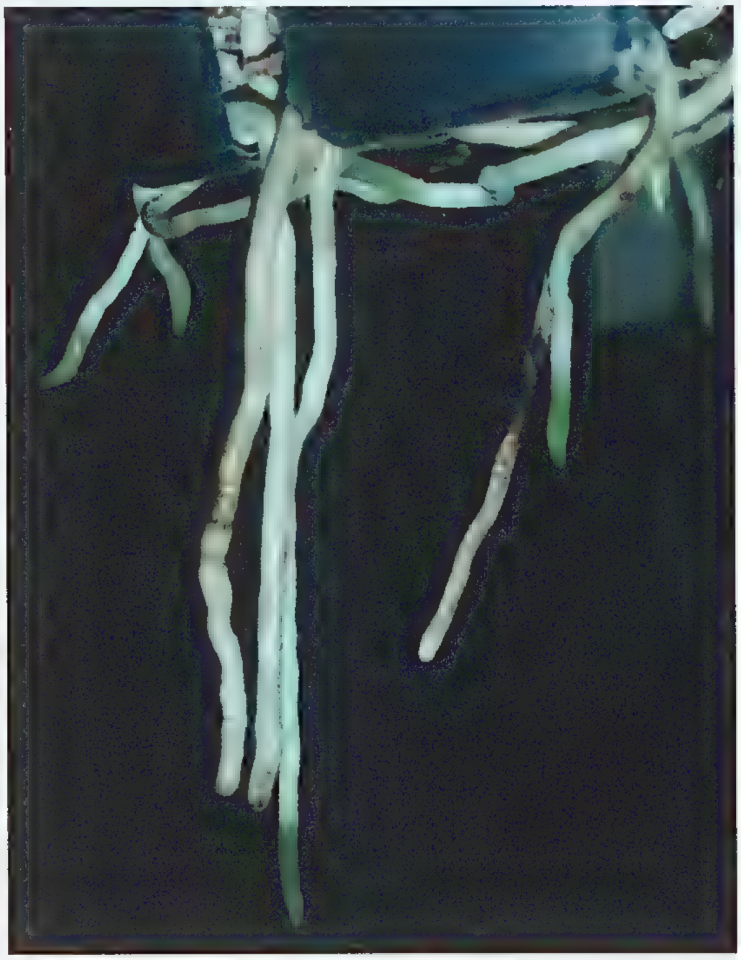
In approximately 5 months time, small green bulbs (protocorms) appeared in one pot (there was no germination at all in the other pot).

When the plants were about a year old the plastic was removed and the pot placed in a large plastic tub.

For the next 5 months they were fertilised while still in the towelling and after 18 months were about 4 cm average height.

I repeated this experiment with *D. kingianum* "Betty" seed and have again been quite successful.

I recommend to anyone to try this as it is quite a inexpensive method and the strict hygiene that is necessary with asymbiotic in-agar nutrient culture is not necessary.



Den. kingianum root tips—a source of fungus.

Sarcochilus hirticalcar - A little orchid that packs a big punch

David Butler, Green Vista Orchids

When in the company of other Australian natives the flowers of *Sarcochilus hirticalcar* are quite diminutive and easy to miss. However, in hybridising, this is one orchid which punches above its weight in several significant ways.

Only discovered in 1966, *S. hirticalcar* is a lovely little epiphyte which now has a place in many native orchid collections. It prefers to be mounted, hung in an airy, humid location, and kept away from winter chills. I have had success growing it on natural cork either bare or with a little bit of bush moss. After moving to the Central Coast I remounted my epiphytes and now have a collection of *S. falcatus* and *S. hirticalcar* happily mixed-up and, in some cases, growing together on the same mount. Out of flower the plants of each look very similar. The short racemes of *S. hirticalcar* carry several long-lived flowers coloured greenish-yellow with red around the centre and extending up the edges of the petals and sepals. The labellum is comparatively large and a prominent feature of the flower.

In hybridising the many floral features of *S. hirticalcar* are used to good effect. Some are listed below:

1. Flowers open flat, are of sturdy texture and each flower may last several weeks.

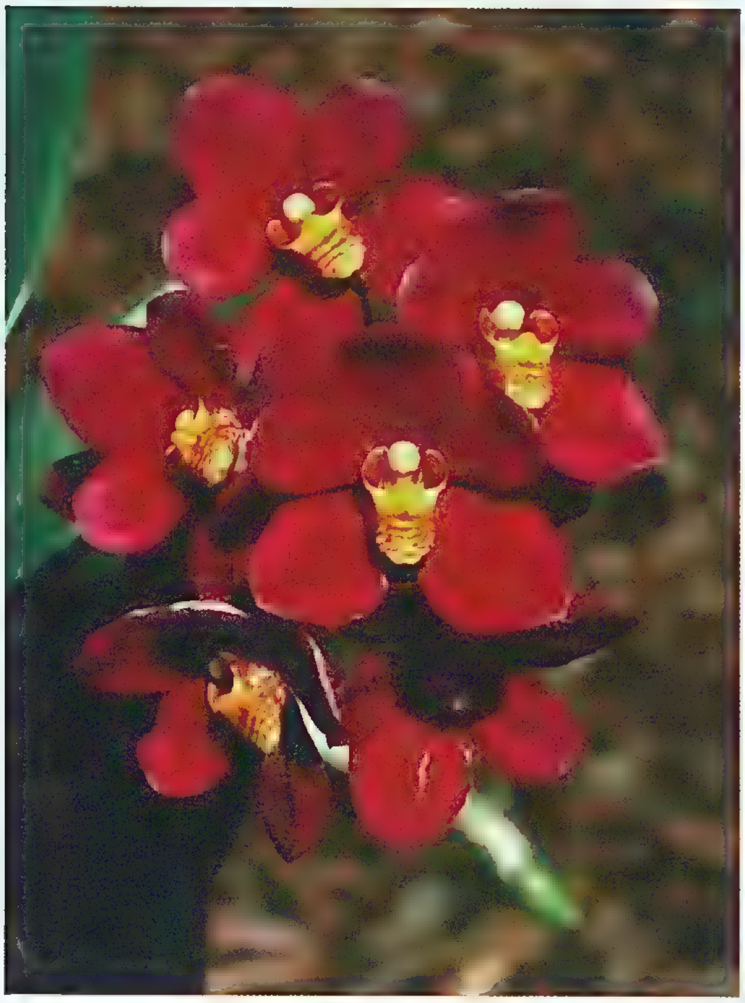
2. The colours can strongly influence the colour of its progeny. It has been responsible for several of the yellow hybrids which abound today, the yellow of *S. hirticalcar* being a dominant feature when it is crossed with light-coloured sarcs such as *S. hartmannii*. When crossed with multi-coloured flowers such as *S. fitzgeraldii* it often produces solid reds such as *S.* Nicky. In such cases the small amount of red in the *S. hirticalcar* is able to become the dominant colour in the resulting hybrid.

3. The prominent labellum of *S. hirticalcar* can be quite dominant in its hybrids and this trait is never entirely lost in future generations. Although the big labellum may seem overly generous in the *S. hirticalcar* flower, its influence in hybridising is a welcome feature as the larger sarc species are found wanting in that department.

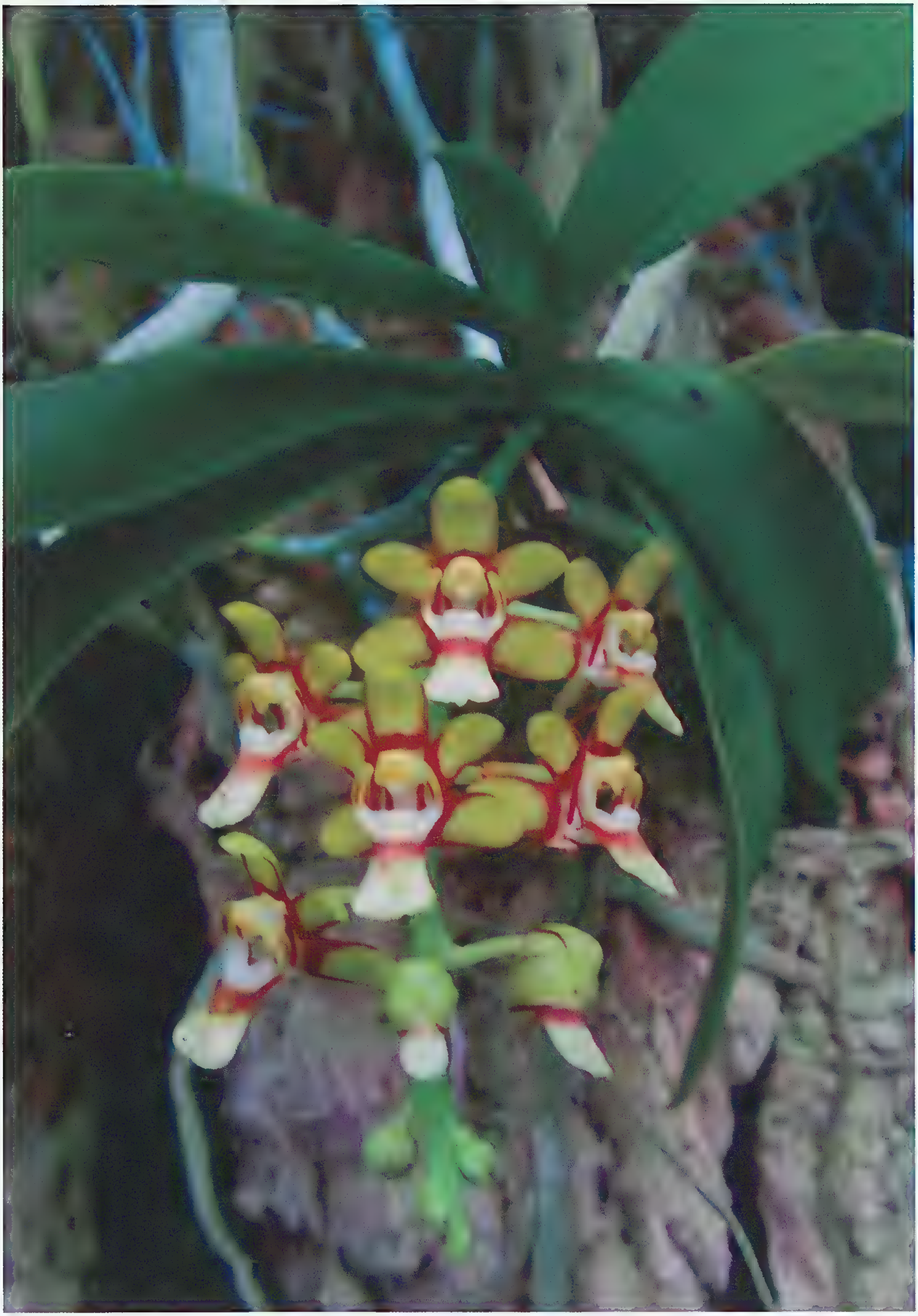
Flowering times are mainly late spring and summer. Hybridising *S. hirticalcar* with spring-flowering sarcs often gives progeny which flower at odd times throughout the year or almost continuously, as is the case with *S.* Velvet.

Although the flowers of *S. hirticalcar* open a few at a time this feature is less noticeable in its hybrids and especially so once the 'primary hybrid' stage is passed.

Many *S. hirticalcar* hybrids are found in collections without the grower being aware. A few of these hybrids are *S.* Velvet (50%), *S.* Nicky (50%), *S.* Riverdene (50%), *S.* Cindy (38%), *S.*



Sarcochilus Duno Nicky's Twin 'Eloise'



Sarcochilus hirticalcar plant in flower.

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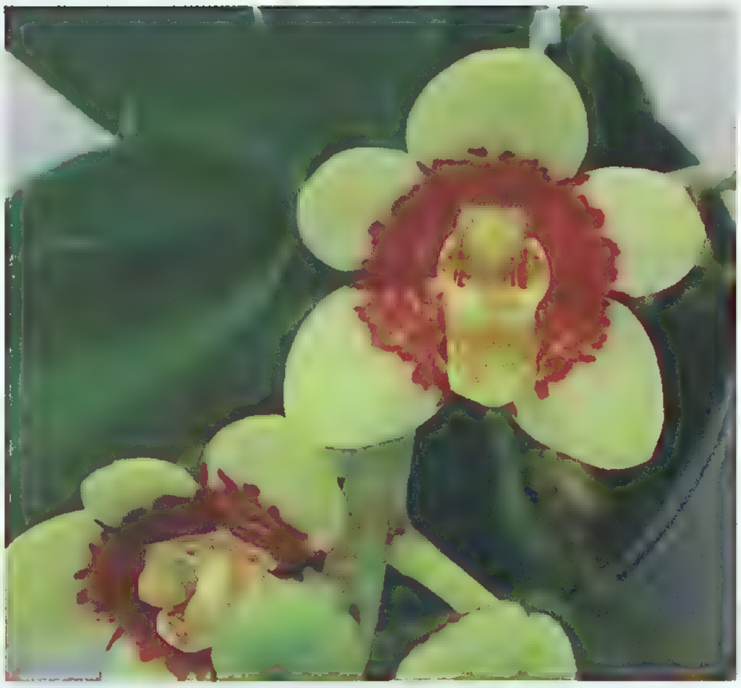
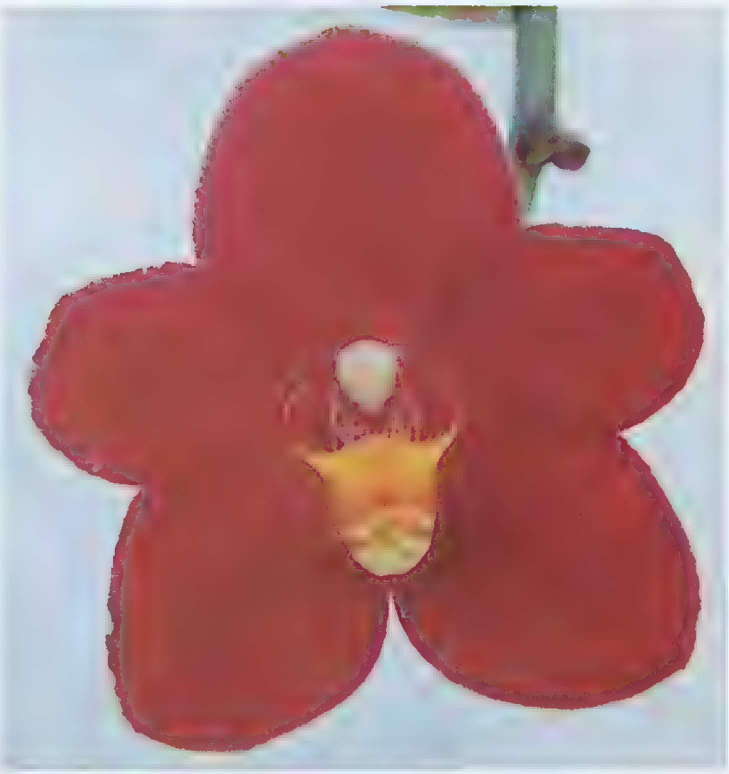
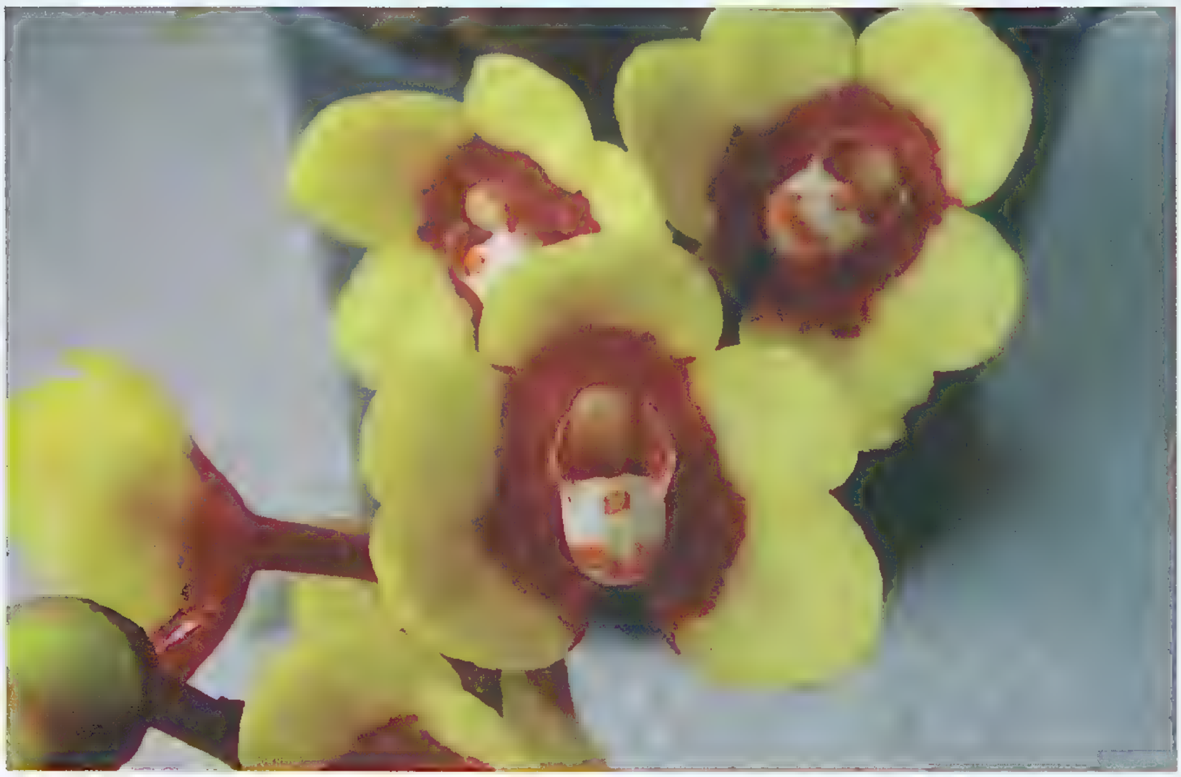
Bessie (25%), *S.* Duno Nicky's Twin (25%), *S.* Velvet Dawn (25%), *S.* Victor (25%), *S.* Kellie (25%), *S.* Allure (12%), *S.* Magic (12%), and *S.* Galaxy (12%).

While *S. hirticalcar* itself may be no longer used much in hybridising its progeny such as *S.* Duno Nicky's Twin and *S.* Galaxy are producing classy reds and yellows. Also in the pipeline are red/ yellow combinations and all thanks to a little orchid which could easily go unnoticed.







Sarcochilus Velvet 'Nice Yellow 2014' (top)

Sarcochilus Allure 'Bright' (2013) (middle)

Sarcochilus Galaxy 'Bright Gold' (left)

Sarcochilus Allure 'Pretty Mottle (top) and *Sarcochilus* Bessie 'Blushing Bride' (bottom)

Phaius australis Dunghutti Recovery Project

Tony Clarke and Amie McElroy

Readers will recall and can refer to the article on the *Phaius australis* recovery project by Booroongen Djugun College (*The Orchadian* 16 (12), June 2011). This project involves replanting seedlings from the parent plants at the site of the Kempsey colony and other sites found to be suitable.

Laura Simmons is undertaking postgraduate research on *Phaius australis* at The University of the Sunshine Coast. Laura has taken genetic samples of the *in situ* colony and has found them to be identical to other populations.

A Scientific Licence for Translocation from the Wildlife Licensing and Management Unit (Office of Environment and Heritage (OEH)) has been obtained.

It is very important that well meaning amateur orchid growers DO NOT do their own planting of *Phaius* into the wild. Most *Phaius 'australis'* plants that I have seen at A.N.O.S. shows are certainly not that, and almost certainly are descendants of *Phaius* that were imported into this country.

I am sure that I speak for the overwhelming majority of Australian native orchid lovers when I say thank you Booroongen Djugun College for your persistent and ongoing work. (Tony Clarke)

Report by Amie McElroy:

The Aboriginal community-driven project has involved coastal communities of the Dunghutti and Gumbaynggirr Nations in all aspects of planning and delivery including:

Development of the Translocation and Management Plan, approved on 13 September 2012.

Phaius plants in habitat following planting and establishment.

Planting team with seedling plants ready for putting into the restoration site.

- Contribution to the scientific License application. A Renewal application with variation was approved on 21 February 2014.
- Contribution to media articles.

Twenty eight Dunghutti and Gumbaynggirr Aboriginal students have graduated in Certificate II, III and IV in Conservation and Land Management.

Nine Coastal *Phaius australis* habitat sites were

Assessing one of the restoration sites with swamp paperbark habitat.

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chosen for planting by stakeholders in collaboration with NPWS field Officers identifying suitable habitat for planting

The planned propagation of 1500 tube stock from flask and transfer into 100mm pots was reasonably successful. An unsuccessful batch brought the total number to 1343 and total losses in 2012 to 157.

Tending the Nursery plants proved to be a challenge. We had a further fifty losses bringing our total 2014 number of propagated Phaius to 1,293 and total losses to 207. Cold winter months and frosts affected the growth of 486 *Phaius* seedlings. During the lead up to and during winter their growth slowed down and the leaves went black and died off leaving a bulb. We examined the plants and found that the roots and bulbs were still viable. These plants sprouted new leaves and with careful tending and monitoring, grew to a suitable

Installing seedling *Phaius* into habitat.

planting size and were planted in September 2014.

Weeding was carried out on nine identified National Park and IPA *Phaius* habitat locations including Booroongen Djugun Limited's Jidaanga Wetland.

We have completed planting *Phaius australis* in 10 identified locations: A total of 1293 *Phaius australis* were planted in 10 identified sites including 6 *Phaius australis* that were planted at Gaagal Wanggaan (South Beach) National Park as part of the Jidaanga *Back to Country* Programme. Although the site is good habitat, we chose not to do further plantings at this site due to the large volume of visitors noticed during our site survey visits.

Monitoring checks have been carried out at the *Phaius* Translocation sites. Survival rates for the plantings is 75%.

The project has employed 30 Dunghutti and Gumbaynggirr community members in weeding and planting activities. The majority of the weed work was carried out by the men and the planting was carried out by women in line with Aboriginal cultural protocol.

"Jidaanga" Marquee: Booroongen Djugun developed and paid for a **Jidaanga Cultural Project Marquee** for use at the launch and other educational events.

Support for the project - donations: The project has received various monetary support from organisations including the Australasian Native Orchid Society, Australian Native Plant Society, and Bunnings Kempsey who provided the irrigation for the Nursery.

National Parks and Wildlife Services OEH – "Jidaanga Back to Country" funding: The Office of Environment and Heritage funded a *Back to Country* programme raising awareness which involved the Aboriginal community members, Indigenous rangers and Elders to learn about the process of flasking and propagating the endangered orchid at Booroongen Djugun College's Jidaanga Nursery and day trip to various coastal *Phaius australis* habitats. This was an opportunity for the Elders and younger generation to share stories of 'Country'.

Media coverage The Jidaanga Cultural project was given widespread media acknowledgment through the local community Newsletters including Macleay Landcare, and our own The Native Bee Newsletter and the Northern Rivers CMA E-Newsletter. The Orchid Society's interest was exceptional, and as a result articles were published in:

- Australian Network for Plant Conservation
- The Melbourne Eastern Orchid Society Bulletin
- The Ecological Management & Restoration Journal
- The Australian Orchid Review
- The Orchadian (Vol. 16 number 12)

Local Newspapers including The Macleay Argus and the Mid Coast Observer also covered this

Our OEH partner has begun the development of a Geo Map file called a Geo/Shape File to include accurate locations and overlays which can include cultural sites which will give us an indication if there is a connection to the *Phaius*. Emmanuel Fewquandie showed us a preview of the work and it's very exciting. This will assist the cultural and heritage aspect of the project. We will be endeavouring to gain support for an Environmental Trust dissemination project once this project is completed. We would love to take our success on a road show to encourage more threatened species recovery projects. The *Protecting our Places* Facilitator used this project as an example of a successful project for the 2013 – 2014 workshops. We gave permission for Jessica Herder to use a selection of photos for her *Protecting Our Places* workshop's presentation. It is hoped that this project will be considered for the Environmental Trusts Dissemination funding to encourage threatened species translocation projects to the wider Australian community.

project over its life

The National Indigenous Times newspaper reported two stories, one of which focussed on the awards and the second on the project's role in showing that natural resource management is cultural business.

Awards:

The project has also been successful in receiving recognition through receiving awards including:

- Finalist, Banksia Awards 2012 Indigenous Category.
- Winner, Indigenous Category: The North Coast Regional Landcare Awards 2013.
- Special Conservation Award: Australasian Native Orchid Society 22 August 2013. The Project Officer and representatives of OEH North East Heritage Division were invited to attended the Australasian Native Orchid Show and Conference to receive the award for the College's ongoing partnership with OEH North East Heritage Division for award for their contribution to the protection and recovery of the endangered orchid *Phaius australis* also known as Swamp orchid and for the project's role of strengthening the broader community recognition and understanding of the Aboriginal Cultural significance and value of this species. The Jidaanga Cultural project banner and photo display was set up for the occasion.

Genetic Testing:

Laura Simmons, Ph.D. candidate from Sunshine Coast University took 22 genetic samples of the in-situ population under a Scientific Licence. The report is part of the unpublished research, and Laura is limited to the amount of information she can disseminate. Laura will make a final report to the Licensing section of OEH and a final report of her findings when published and will contribute to the OEH recovery plans.

Project Outputs

The success of the project launch and large turn up of guests.

The propagation house was built on schedule and in time for the launch.

Booroongen Djugun College provided specialised training for Aboriginal community members in Certificate II in Conservation and Land Management and IV Conservation and Land Management. The Certificate II students propagated the flasked seedlings in 2011. The Certificate IV students provided valuable input into the development of the Translocation Plan and Scientific Licence. Twenty eight students successfully completed training in 2012.

The translocation Plan and Scientific Licence were submitted to Wildlife Licensing Office of Environment and Heritage on 20 June 2012 and approved on 13 September 2012.

A renewal application was successfully submitted in November 2013. A variation was authorised to change one translocation location: Gaagal Wanggaan (South Beach) NP site. The site was gaining high number of visitors and deemed unsuitable by the Gumma IPA Management committee. The Gumma Indigenous Protected Area (IPA) islands of Bandicoot and Energy Spit was accepted as a preferred site. A constant presence of IPA rangers which will improve planting success.

1500 *Phaius* in flask were ordered. One batch was unsuccessful on delivery and another batch died shortly after propagation into tubes. 1343 seedlings were successfully propagated from flask with 50 total losses over the first 2 years of the project. The final number of *Phaius* successfully propagated from flask is 1,293

Ten planting sites were identified and mapped.

Eight planting sites were weeded prior to planting.

807 *Phaius* successfully grew to an ideal planting size and a further extension was requested.

486 *Phaius* seedlings were affected by the wintery conditions. During winter growth slows down and a number of the leaves go black and die off leaving a bulb. We examined the plants and found the roots and bulbs were still viable. With careful tending and monitoring, these plants eventually sprouted new leaves and were continuing to grow normally. As a result, a total of 486 *Phaius* were translocated in mid-September.

1293 *Phaius australis* have been planted in ten identified and approved sites.

Installing seedling *Phaius* in the habitat among gristle ferns (*Blechnum*)

Aunty Shirley Doyle (left), Mick Marr (NPWS Field Officer) and Veronica Morris (right) planting out on country, showing habitat favoured by *Phaius*.

Weeding and planting in Phaius Habitat:

Gumma Indigenous Protected Area

Site 1: 1723m² of area weeded for a variety of invasive weeds including, *Lantana camara*, Bitou bush, and Asparagus fern. 100 *Phaius australis* planted on 11- 13 December 2013

Site 2: This site required the most extensive weeding 2039m². 100 *Phaius* were planted 20 – 23 May 2014

Gaagal Wanggaan National Park

Site 3: No weeding was required. 6 *Phaius* were planted on 26 August 2013

Hat Head National Park:

Site 4: 80m² of *Lantana* on the road side adjacent to the site was removed to prevent rangers from spraying the heavy infestation. Fires had been through the proposed planting area 18 months previous to planting and therefore required minimal hand pulling of new weed growth. 100 *Phaius* planted on 14 Nov 2013, and a further 100 *Phaius* planted on 15 November 2013

Site 5: 100m² of *Lantana camara* was treated by cut and paint method in and around the planting site. 100 *Phaius* planted on 16 November 2013

Lime Burner's National Park

Sites 6: 50m² of *Lantana* and *Senna* was treated by hand pulling and cut and paint method and removal. 140 Phaius were planted on 8 April 2014.

Site 7: 100m² of *Lantana* and *Senna* was treated by hand pulling, cut and paint method and removal. 160 *Phaius* were planted on 15 April 2014.

Booroongen Djugun Limited

Site 8: 50m² of *Lantana* was treated using cut and paint method and removal prior to planting. 50 *Phaius* were planted on 15 April 2014. A further 186 *Phaius* planted on 20 September 2014

Yarrahappinni National Park –

Site 9: 100m² of heavy infestations of *Lantana* and *Senna* were treated by cut and painting and hand pulling of seedlings. 100 *Phaius australis* were planted at this site on 17 September 2014

Site 10: No weeding was necessary. 100 *Phaius australis* were planted at this site on 17 September 2014

The Project celebration on 11 June was a wonderful day and provided opportunity for the attendees to discuss the project in details and answer any questions. A Slide show was presented throughout the occasion and an information sheet was provided for the guests to take home and a light lunch was catered by Booroongen Djugun Kitchen staff and Trainees.

Overall the project progressed well. It has been documented that *Phaius australis* isn't an easy plant to propagate and as this is reportedly the first time that this plant has been propagated for translocation, we trialled the potting mediums learning from and improving our mix with the aim of getting the mix as similar to the translocation soil types as the project progressed. The translocation sites and their habitat's variations in ecology including canopy density, understory density and diversity, soil types and moisture content and planting design were also chosen for their dissimilarities to make the most of the learning opportunities available to us. All that is being learnt from this project will assist in the recovery plans and we will have major input into this.

Opportunities

Lessons learned other opportunities and how benefits from the project could be spread more widely.

Acknowledgements;

Thank you to:

- Booroongen Djugun Limited/ Booroongen Djugun College for all the information of the *Phaius australis* (Dunghutti) project;
- Amie McElroy, Aboriginal Extension Project Officer, Booroongen Djugun College, for article supplied, proof reading and protocol;
- Phil March for the inspiration; and
- Ian Broadfoot for I.T. and word processing.

And none of this would have been possible without Aunty Maggie M Morris, Dunghutti / Gumbaynggirr Elder

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Stanthorpe Rare Wildflower Consortium Passchendaele State Forest Wildflower Walk Report

David James

The Stanthorpe Rare Wildflower Consortium holds three Wildflower Walks per year around Queensland's Granite Belt with one held in August, one held in September and one held in October. The September Wildflower Walk was held on Sunday the 21 September 2014 and was to an area of pavement (granite outcrop) in the Passchendaele State Forest. The walk commenced at 9:30 am.

Members of the Australasian Native Orchid Society (Qld) – Kabi Group try to attend the Stanthorpe Rare Wildflower Consortium's Wildflower Walks as the Granite Belt in late winter and early spring can provide interesting

flowering orchids that cannot be seen anywhere else in south-east Queensland or surrounds.

The September 2014 walk was attended by around three Stanthorpe Rare Wildflower Consortium members who acted as guides and some twenty-three members of the Stanthorpe Rare Wildflower Consortium and the public including a number of Stanthorpe Field Naturalist Club members and two Kabi Group members. The event was advertised locally and on the internet including Facebook.

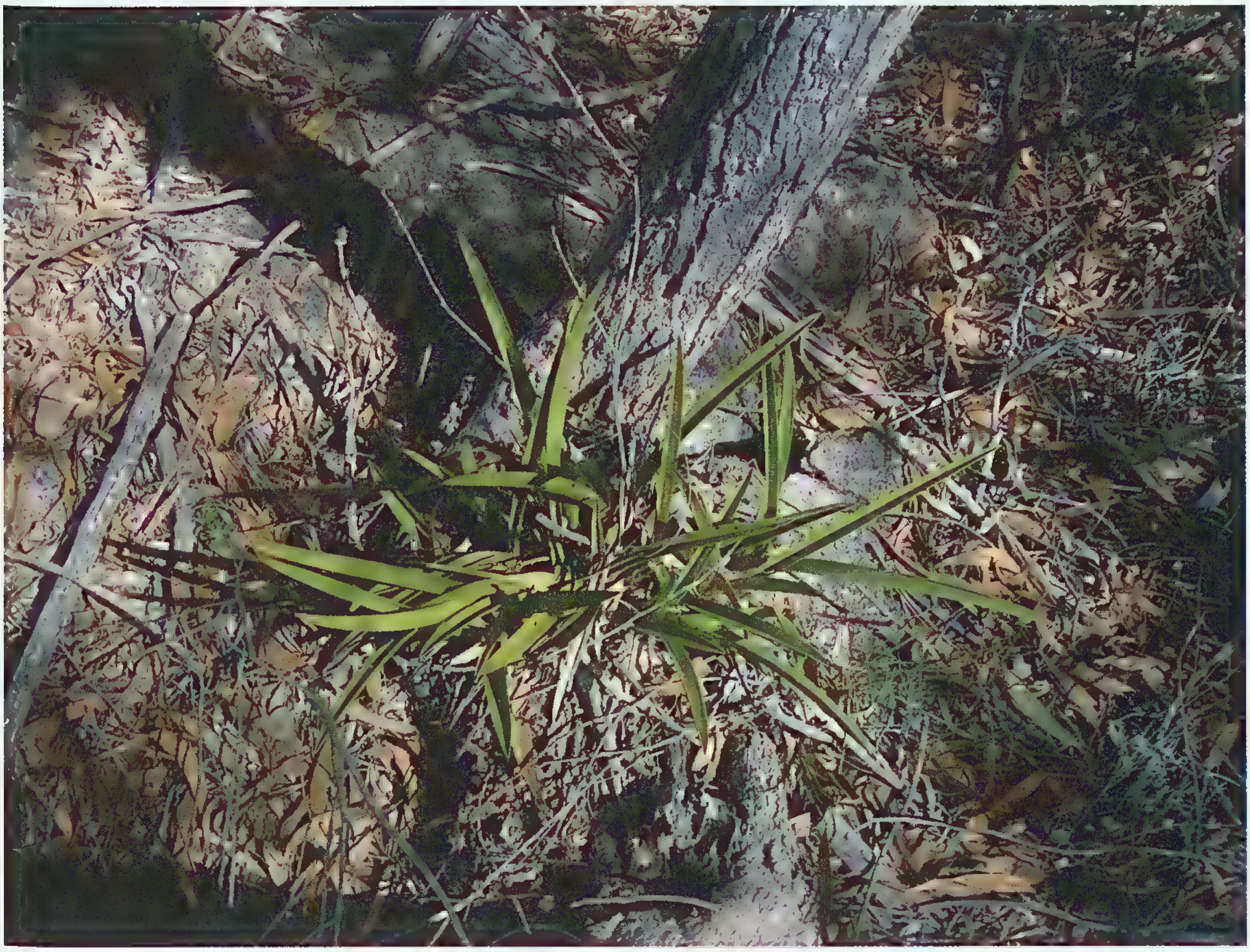
The walkers are broken up into groups depending on how many guides there are. In this case there were two groups.

The walk was scheduled to finish by 12:30 pm however walkers can leave at any time provided they let the guide know and sign-out when they get back to the vehicles.

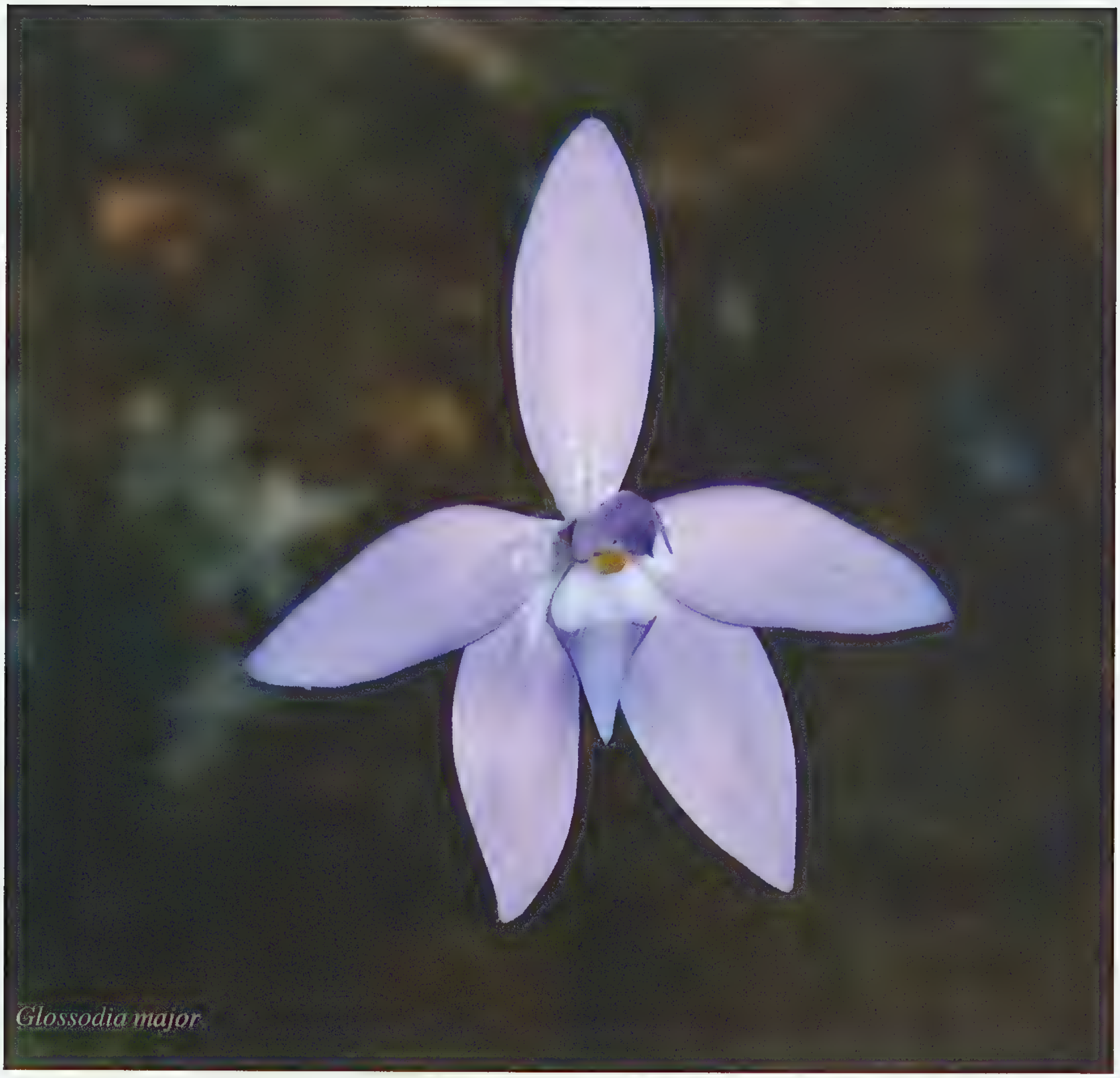
The plan was to attend the walk and if it finished as scheduled then take a quick run down to the part of the Sundown National Park visited by the Kabi Group orchid amblers on Saturday 30 August 2014 to check out if the orchids seen in bud were now in flower and could be identified.

There were not huge numbers of orchids nor flowering orchids around the pavement area. There were seven orchid species seen and four of these were in flower. There was not large numbers of flowers and some of the different species were represented by a single flowering plant.

One of the orchid species seen was a plant of *Cymbidium canaliculatum* that was in bud. This was the first time I have seen this species on the Granite Belt. It is meant to be in the area but I have never seen it before. I have looked very carefully in the ironbark forests in the traprock country towards Sundown National Park without success. This plant was not in an ironbark but a *Eucalyptus prava* (I think). My



Erythrorchis cassythoides (left, flower in life presentation) and *Cymbidium canaliculatum* (above)



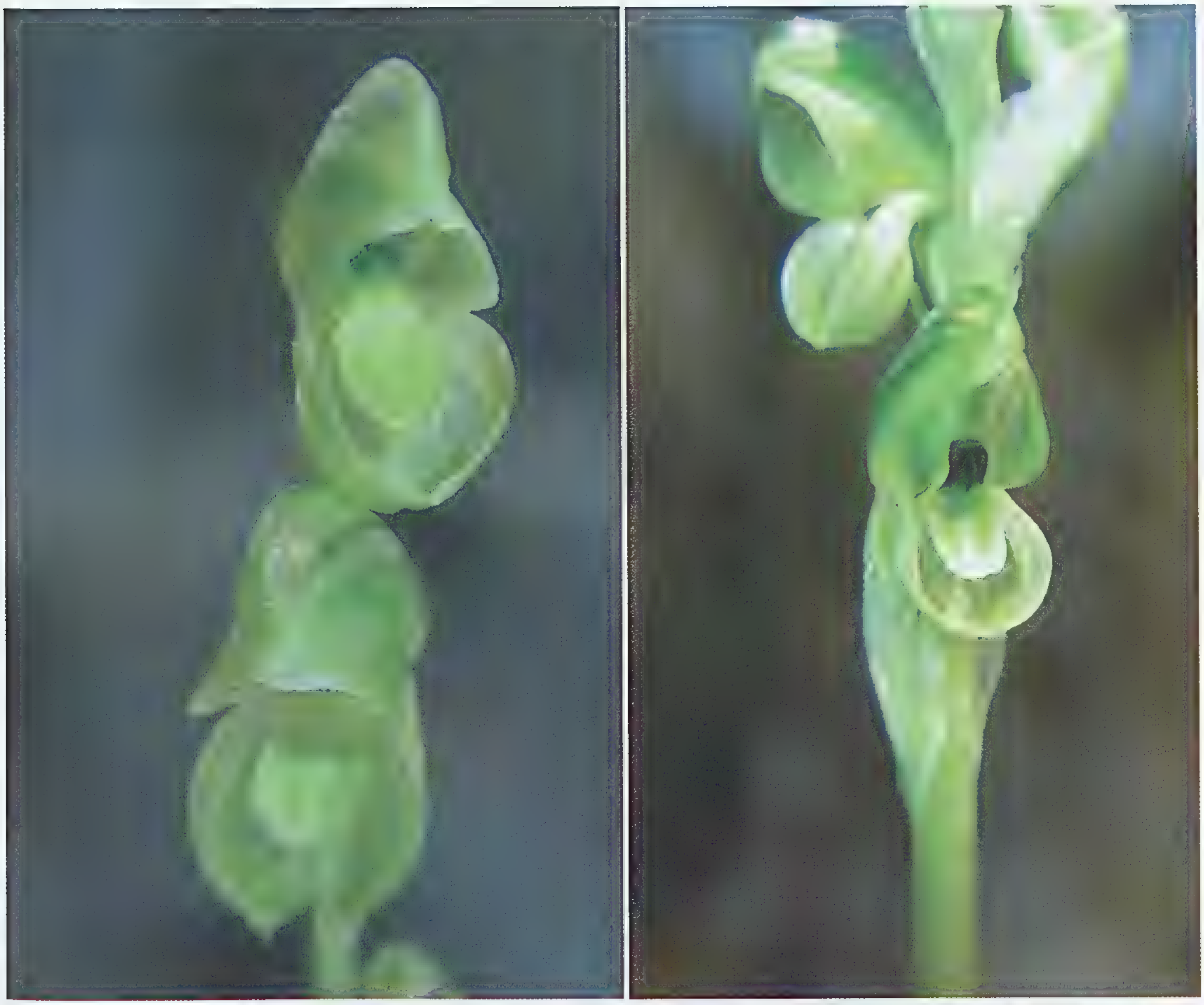
Glossodia major

identification of plants other than orchids can be wildly wide of the mark. [ed.—the bark suggests more likely a bloodwood than a red gum like *E. prava*, maybe *Corymbia dolichocarpa*.] My field identification of orchids can also be wide of the mark but not normally wildly wide of the mark. I can generally get the genus correct.

The orchids seen were:

Pterostylis sp. (leaves)
Cymbidium canaliculatum
Caladenia fuscata
Glossodia major
Pterostylis bicolor
Erythrorchis cassythoides
Calochilus sp. (leaves and buds).

I originally thought the flowering plants of *Pterostylis bicolor* were *Pterostylis mutica* but closer study of my photographs indicated there were *Pterostylis bicolor*. *Pterostylis bicolor* differs from *Pterostylis mutica* by having a more robust inflorescence (twice to three times thicker than *Pterostylis mutica*), thicker (fatter) ridging on the labellum appendage and the colour of the labellum appendage is blue black in *Pterostylis bicolor* and green to dark green or green black in *Pterostylis mutica*. Based on these observations the flowering orchids identified as *Pterostylis bicolor* at Sundown National Park during the Kabi Group's 30 August 2014 orchid amble were in fact most



Pterostylis mutica (top left) and *P. bicolor* (top r.)

probably *Pterostylis mutica* with dark green or green black labellum appendages.

In the photographs of *Pterostylis bicolor* and *Pterostylis mutica* please note the thickness of the inflorescences. For scaling purposes the flowers are of similar size.

The Passchendaele State Forest walk finished at lunch-time so the two Kabi Group members had a quick bite to eat and headed off to the part of Sundown National Park visited by the Kabi Group orchid amblers on Saturday 30 August 2014.

The above photograph of *Pterostylis mutica* was taken at this part of Sundown National Park.

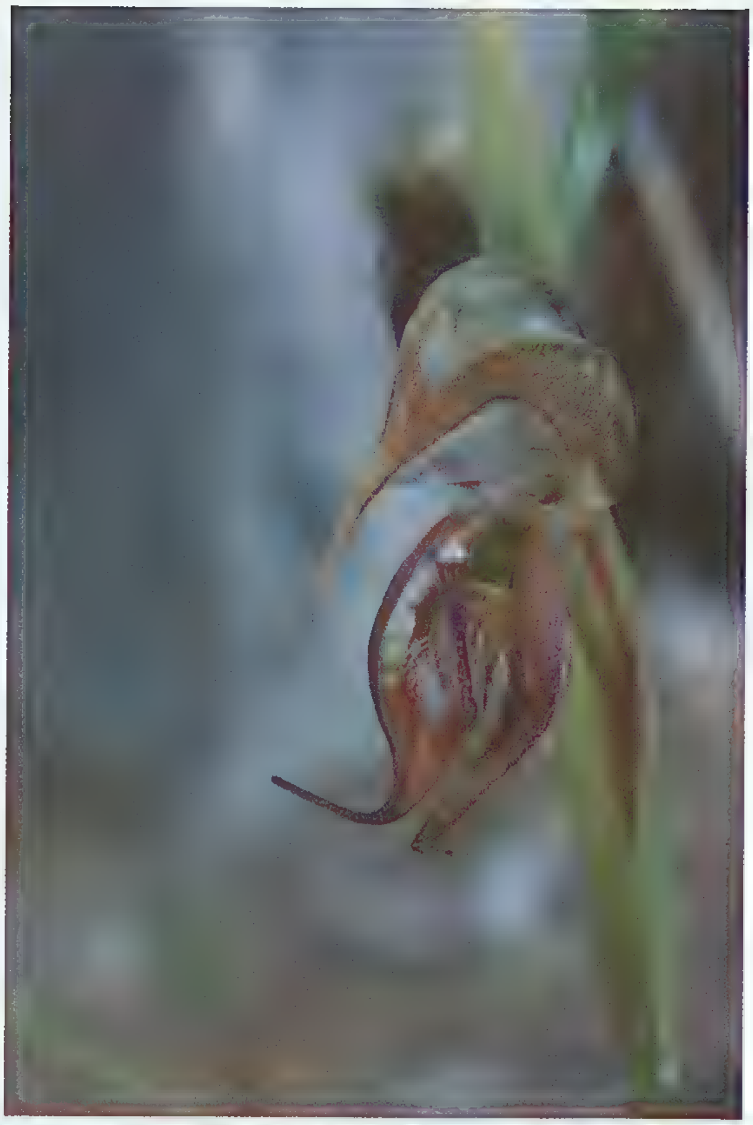
A total of four orchid species were seen during this quick visit to part of Sundown National Park. These orchids were:

Pterostylis hamata
Caladenia fuscata

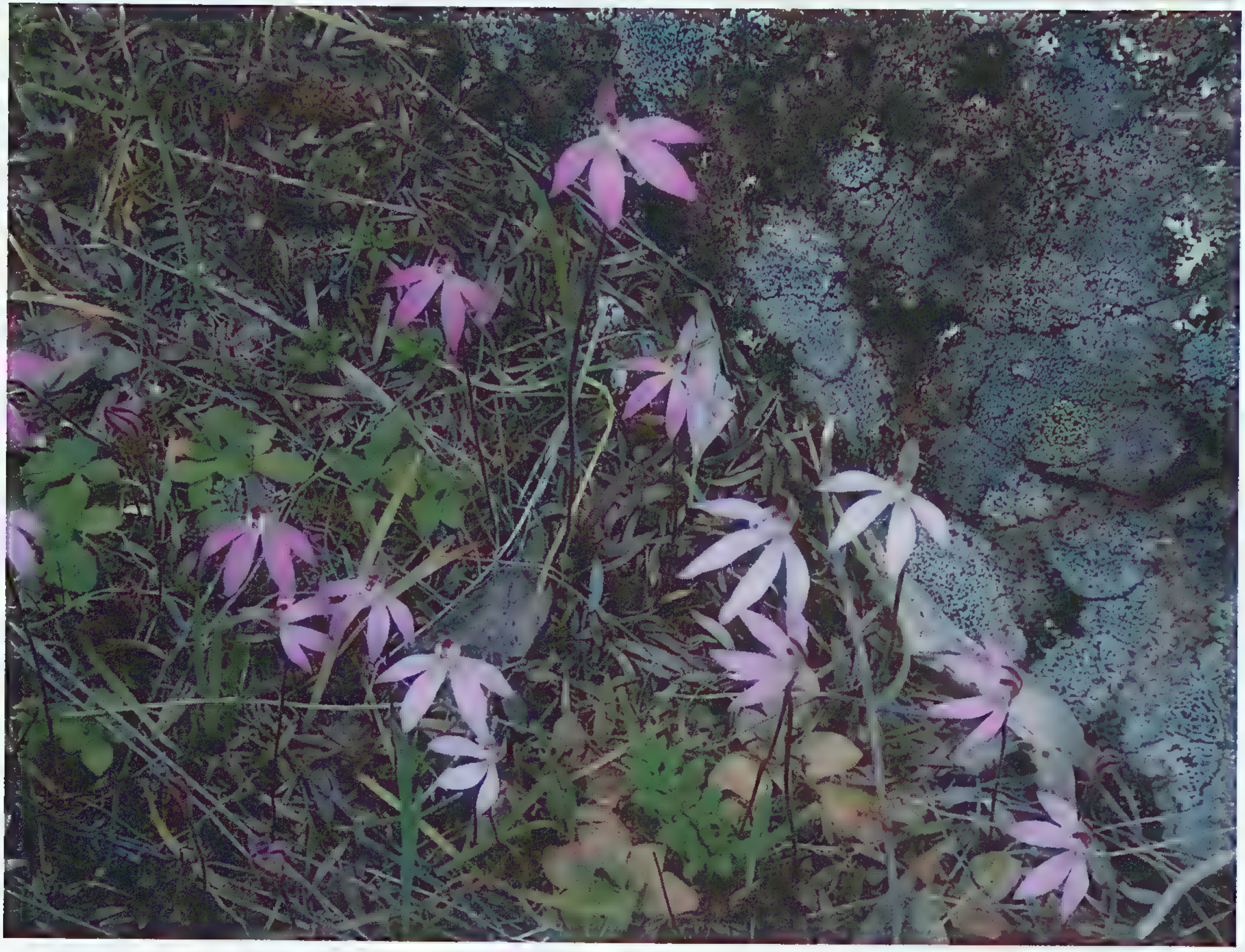
Thelymitra sp. (leaves and buds)
Pterostylis mutica

The *Thelymitra* sp. were in bud and were seen during the 30 August 2014 Kabi Group orchid amble but the inflorescences were not advanced enough to tell if they were *Calochilus* sp. or *Thelymitra* sp.. *Calochilus* sp. have large bracts associated with the buds whereas *Thelymitra* sp. do not. The plants at this part of Sundown National Park did not have large bracts associated with the buds so the orchids are most likely to be *Thelymitra* sp..

The numbers of flowering *Caladenia fuscata* was impressive. These flowers varied from 12 - 13 mm in height to 25 mm high and in colours from white, pale pink, pink, dark pink and so dark pink as to be red pink.



Pterostylis hamata (right) and *Caladenia fuscata* colony (below).



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Orchids in The Rock Reserve

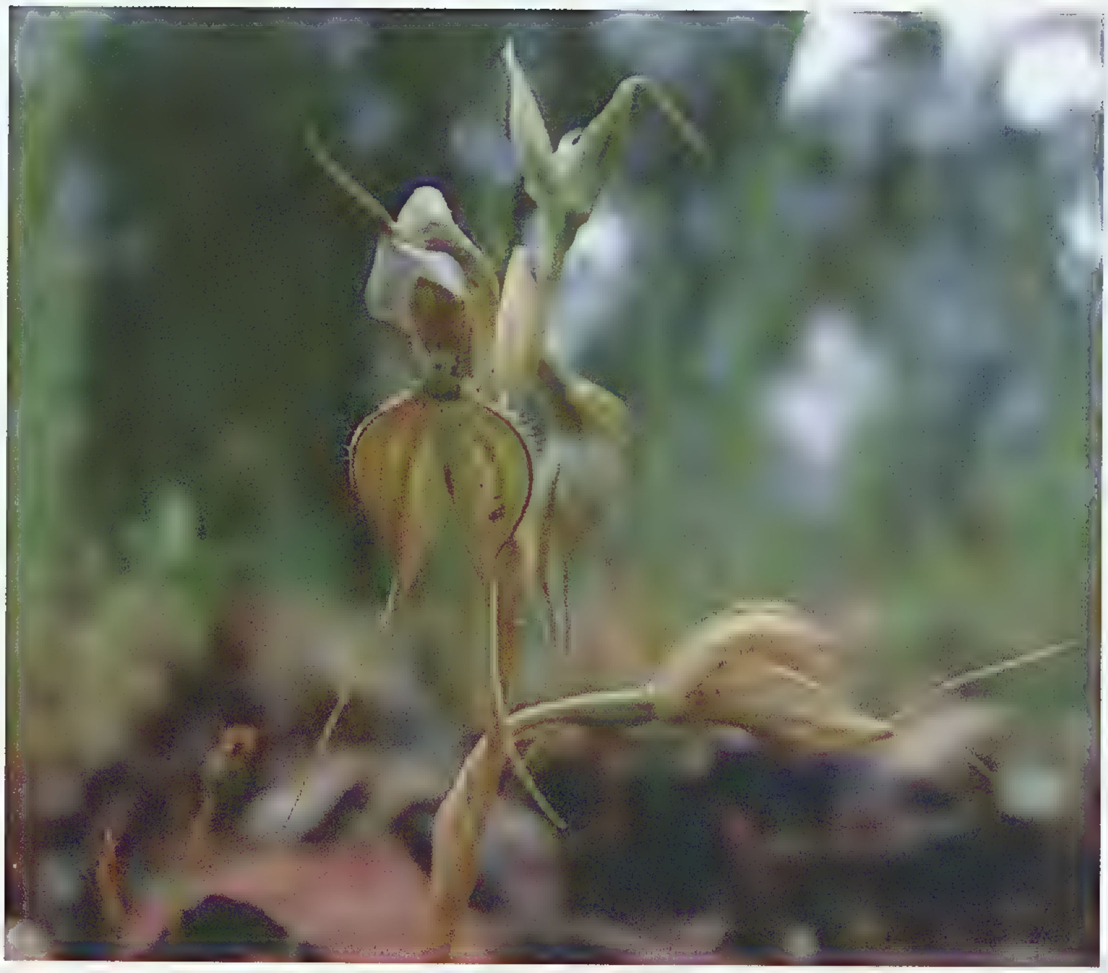
Text: B. Burgess, Photographs: L. Field

In the December 2014 issue of The Orchadian there was an item concerning The Rock and the absence of orchids during and shortly after the drought. Len and I can tell you about our experiences at The Rock Reserve during this period. We moved to the Albury district in 2005 and since then we have visited The Rock frequently. We were already elderly and have, therefore, restricted our explorations to the slopes where the walking is easier. Orchids can be found there, perhaps not with a great diversity of species but certainly in significant numbers during their season.

At our first visit we, too, could not believe how dry and barren the lower slopes were. There was very little topsoil and the small rocks had been moved to form corrugations probably to slow the runoff from rain. Upon investigation I found that quarrying the lower slopes had begun in 1891 and continued until the 1940's. The topsoil had been removed and the gravel which was suitable for road base was used as ballast for the Sydney to Melbourne rail line. The Rock (or Kengal to the Wiradjuri people) has an interesting history as well as being a great spot for the orchid enthusiast.

The Reserve is significant for its location on the boundary between the Riverine Plains and the Western Slopes of the Eastern Highlands. Travelling from the north, the first sighting is of a magnificent rock formation rising 570 metres above sea level and resembling a lion. For this reason it is known as the Lion of the Riverina. It is also one of only a few remaining outcrops of the Devonian geological period sediments in the region. The NSW National Parks and Wildlife Service manages the reserve and has compiled a list of known orchids but acknowledges there are probably more to be found.

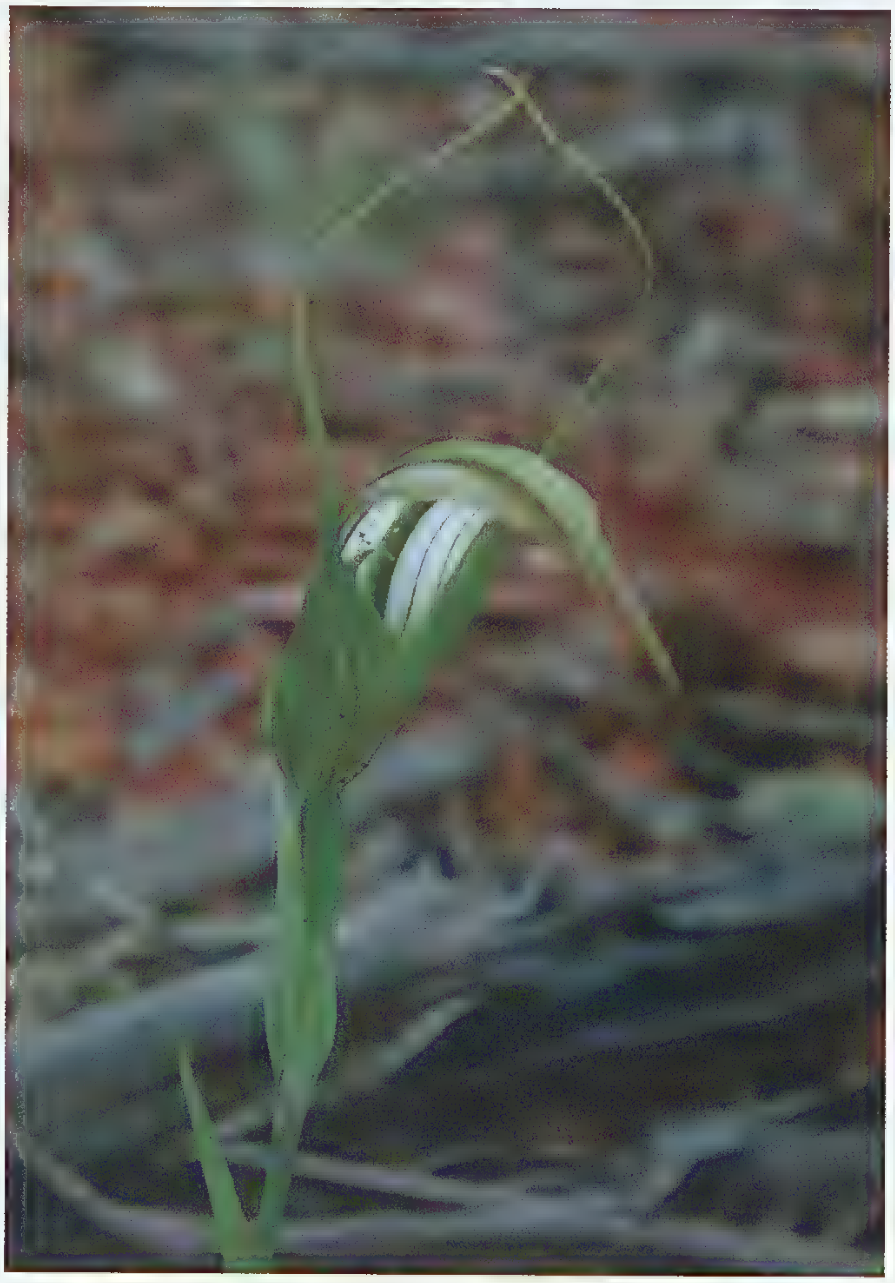
Our expeditions have, so far, taken place between April and October during the years 2008-2014. I keep a diary of what we have seen and the date and seasonal conditions certainly appear to affect the flowering season. *Pterostylis* sp. aff. *revoluta* is our earliest record, flowering in April and May but some flowers have already gone to seed in May. Len and I need to make a bigger effort to explore in late autumn and early winter.



Pterostylis petrosa, The Rock

Pterostylis sp. aff. *revoluta*, The Rock (below)

During July *Pterostylis nana* commences flowering in its hundreds. It is still flowering during August but in early September many have gone to seed. It was during July that we first observed the *Pterostylis* rosette which we have not yet seen in flower. Apparently, the rosette resembles the *Pterostylis woollsii* rosette. Spikes were also developing on the many *Glossodia* plants.



August is a bumper month. In addition to *Pterostylis nana* and *Pterostylis nutans*, *Caladenia caerulea* flowers prolifically and *Pterostylis mutica* makes an appearance. About the middle of August, *Diuris maculata* commences flowering. Flowering can continue into September as well. On 28.9.2010 we observed masses of very tall *Diuris* with clear yellow petals. The only brown was on the crossed lateral sepals.

When spring arrives in September *Caladenia carnea* is very noticeable with its several colour forms. *Caladenia carnea* is joined by

Pterostylis rosette (species unknown), The Rock (left)

Caladenia dilatata, Galore Hill (below)

Cyrtostylis reniformis and a multitude of *Glossodia major*. *Pterostylis mutica* has a long flowering period from the middle of August through to the end of September. The *Thelymitra* leaves are beginning to show spikes developing. Unfortunately, Len and I have not seen any *Thelymitras* in flower at The Rock, an omission we must correct this year.

Towards the end of September we noticed spikes developing on the *Pterostylis petrosa* rosettes. As we had never managed to see them in flower we decided to visit every few days until the flowers opened. Success came on 17 November. Also on that day we unexpectedly saw a number of very tall plants of *Calochilus robertsonii and Microtis unifolia* in flower.

Galore Hill Reserve

About 15kms north of Lockhart on the road to Narrandera you will find Galore Hill Reserve. The hill has an altitude of 379m above sea level and the Reserve covers approx. 500 hectares. It commands excellent views over the surrounding plains. Geologically it is related to The Rock which is about 13 kms to the east and has similar sandstone and quartzite boulders.

Prior to 1969 when the Reserve was dedicated and the management was passed to the Lockhart Shire Council, the area had been grazed by sheep. The Reserve now provides facilities for visitors at the saddle and summit while the cultivated gardens of native Australian plants at the base of the hill are maintained by the Wagga Wagga District Group of the Australian Plants Society (NSW). Before 1972 only five species of orchids had been recorded but, in that year. A.Logan and F.Prichard surveyed the Reserve and recorded eighteen species.

Because of the greater distance, Len and I have not visited Galore Hill as frequently as we have visited The Rock. We have seen a massed display of *Glossodia major* towards the end of

Glossodia major, Galore Hill (left)

Cyanicula caerulea, The Rock (right)

Diuris maculata, The Rock (below)

September. Also in September we saw many *Pterostylis nana* which had mostly gone to seed and there were a number of Spider Orchids in bud. We visited the same area again two weeks later hoping to see the Spiders in flower – we were not disappointed. The tall Green Comb Spiders resembled *Caladenia dilatata* and the *Microtis* species present was probably *Microtis parviflora*.

From our observations, we feel the drought probably affected the number of flowering plants in any one genus and certainly the size of the plants and flowers but the diversity of species was probably not affected. Finding the orchids was just a bit more difficult. Even during the drought there were some good rainfall events and these were frequently followed by a plentiful flowering of orchids.

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Pterostylis nana, The Rock

Growing *Dendrobium bigibbum* in South Western Australia

Wally Heath, South Yunderup WA

Dendrobium bigibbum There are 3 species or varieties, depending on which argument you subscribe to, which are endemic to Australia. I will call them varieties.

Dendrobium bigibbum var. *bigibbum* is distributed between the Archer River, around 100 km south of Weipa, to the tip of Cape York and on some Torres Straight islands, also on the west side of Cape York. It is recognised by its tall growth, fuller shaped petals and a prominent white spot on the labellum.

Dendrobium bigibbum var. *compactum* is found on coastal ranges between Cairns and Daintree. They usually grow in quite exposed conditions and can completely defoliate during extended dry periods. It can be recognised by its short pseudobulbs and fewer flowered racemes. It does not have a white spot on its labellum.

Dendrobium bigibbum var. *superbum* grows between Cairns and Cooktown. Its growth habit is similar to var *bigibbum* but has narrower petals and does not have a white spot in its labellum. This variety is the true Cooktown orchid and is the state floral emblem of Queensland

HABITAT Mainly in the drier types of tropical rainforest that fringe the northern parts of Cape York Peninsula, from Cairns to the Torres straight Islands and also the west side of Cape York. They grow both on trees and rocks in fairly open conditions often in full sun. *Dendrobium bigibbum* grows in a climate that has a hot wet season and a cooler dry season where they can go many weeks or months without any rain.

Dendrobium bigibbum var. *superbum* 'Bera'

Dendrobium bigibbum var. *compactum* 'Wal's Bounty'

HOUSING

Ideally *Dendrobium bigibbum* should be grown under a polycarbonate or fibreglass roof as this will keep them dry during our cold wet winters here in South Western Australia. Most Australian orchids will grow well in our part of the world if given a little protection from the extremes of our climate. I grow my orchids in an unheated house. It is 14 metres long and 4.5 metres wide. It has a polycarbonate skillion roof about 2.4 metres high at the back and 2.2 meters at the front. It runs east west. The northern and southern walls are closed in on the lower half with fibreglass on the northern side, and colour bond sheeting (mainly for aesthetics) on the southern side. The top half of the side walls are 60% shade cloth. This makes sure there is plenty of air movement. In winter the north side is closed with waterproof polyshade cloth to keep the weather out and the warmth in. I have made a roll up blind with the waterproof, it is rolled up for summer. The east and west ends are totally polycarbonate. In summer the prevailing winds are from the East in the morning (which are warm & drying) and SW in the afternoon (which are cooler and more humid). In winter the prevailing winds (which are cold and wet) are from the NW.

I have three benches which are made of galvanised channel and arc mesh tops, they are 1 metre wide & 1 metre high. There is a walkway of 750mm between them.

The under bench floor is wood chip with baby's tears, the walkways between them are blue metal. The northern benches get the most sun and are warmest, the southern benches coolest, the western end gets the afternoon sun. The eastern end gets the morning sun, but is partially shaded by a grape vine during the summer months. So you can see I can get a range of micro climates in my house, from northwest corner warmest to southeast coolest.

I grow my bigibbums on the western end of the northern bench—the warmest part of the orchid house.

Last year the temperature in my orchid house ranged from 3°C TO 47°C, which indicates that native orchids are really tough.

POTS

Plastic pots especially designed for orchids in my view are optimal. Plants are easily removed whenever the need arises with minimal damage to the roots. Plants grown in baskets or terracotta pots sustain massive root damage when they are removed for re-potting, this can set plants back by a whole season or more while they recover. Plastic pots last for years, don't rot and don't easily break, and are relatively cheap.

POTTING MIX

There are probably as many recipes for the ideal potting mix as there are people reading this article. Remember epiphytic orchids don't grow in potting mix in the wild, they grow on tree trunks and branches. Potting mix is there to support the plant and to hold water and nutrients, however everyone has their own mix, so here's mine:-

- 1 measure of coconut chips.
- 1 measure pine bark.
- 1 measure of large perlite.

I only use small potting mix, my plants seem to like this mix and it lasts well. As it holds water well, I save a bit of water.

I recommend re potting every 2 – 3 years depending on how well your potting mix lasts.

WATERING.

Currently I am now using rain water which is generally about pH 6. After adding fertilizer I adjust it back to around pH 5.5 - 6. Why is this? Well plants cannot absorb certain nutrients and elements from the potting mix if the pH is too high, above 7, which is alkaline, or if the pH is too low, below 5, it is acid. A pH level of 7 is neutral. But it seems orchids prefer their water a little on the acid side, ideally around 5.5 - 6.

Experience will tell you when to water; a small plant in a large pot will stay wet longer than a large plant in a small pot. Plants nearer to the open sides of your orchid house will dry out quicker than those in the centre. Like most epiphytes Aussie orchids don't like wet feet, nor do they like to dry right out so water just before they become too dry. In winter water less often and always water on a rising temperature so that they dry out before evening when it cools down, water remaining on the leaves and in the leaf axils can be a breeding ground for fungal growth and bacterial rots. The rule of thumb is "If you're not sure if you should give your plants a drink today, then leave it till tomorrow and go and have a drink yourself". I always water by hand, that way all plants get a good watering and you look at each plant and can see if there are any problems with each individual plant.

LIGHT

Ideally around 60% shade, I am using Opal polycarbonate which is 56% shade and my light levels are around 2500 fc to 3000 fc (26k—32k lux).

If you are using shade cloth remember that the shade factor is determined by the number of

Dendrobium bigibbum var. *compactum* 'Wal's Bonza'

threads per centimetre, which means that white or cream 60% shade cloth transmits more light than green or black 60% shade cloth.

Plants need to produce carbohydrates to grow, they produce this by photosynthesis. This is the process where water and nutrients are taken up by the roots and converted into carbohydrates by the leaves. The water is broken into hydrogen and oxygen using the sun's energy, carbon dioxide is taken in by the leaves and combined with the hydrogen to produce carbohydrates. Plants need as much sun as possible (remembering they won't tolerate full sun) during the day to optimize the energy available for carbohydrate formation.

FERTILISING

I fertilise every week, the fertiliser is mixed using a HOZON proportioner, and these are available from various orchid nurseries for around $50 plus postage. This is a device that fits onto your tap and draws up fertilizer mix at a ratio of 16:1. I mix 150 grams of fertilizer in a 20 litre bucket and apply it through the proportioner with a watering wand. This works out at about ½ a gram of fertilizer per litre, much less than is usually recommended. I find that this is sufficient for good growth and flowering of my plants. I am currently using Peters Hi K Cal Mag Finisher fertilizer. I buy it in a 15 litre bag.

Native orchids should never be fertilised using high nitrogen as this can lead to soft new growths which are susceptible to fungal and bacterial attack, always use a fertiliser with a lower nitrogen value, or add potash to change the nitrogen value.

I do not like slow release fertilizer as there is no way you can know how much fertiliser your plants are getting, and if too much is released it can lead to root burn.

AIR MOVEMENT and HUMIDITY

Try to maximise air movement in your Orchid house without actually blowing them off the benches!

Stagnant air allows bacterial rot to develop and spores of fungi to settle and grow more easily. If you have a fully enclosed growing area, consider installing fans. Try not to crowd your plants as this can also inhibit air movement.

Humidity is vitally important for good orchid growing. Ideally the humidity should not be lower than around 65%, but this is not always easy to maintain, especially in our dry summer climate, and if you have a fairly open orchid house like mine. To maintain humidity you can install a misting system, humidifiers, or sprays under the benches or simply wet the floor a few times a day. A broken surface like wood chips or gravel has more surface area that can evaporate. I have installed an overhead misting system that is controlled by a garden reticulation controller.

PESTS and DISEASES

Slugs, snails, mealy bugs, mites, scale, caterpillars, rats and mice are probably the most common pests encountered. There are many propriety insecticides and baits on the market. Rogor and Confidor are both systemic insecticides and are effective in controlling insect pests. Eco oil, Neem oil and white oil are less toxic insecticides, but must be used carefully in hot weather. Talon is a good rat and mouse bait.

Slug and snail pellets, stale beer and Mesurol 750 are good at controlling these slimy pests, although Mesurol is hideously expensive.

When using poisons ALWAYS read the INSTRUCTIONS, wear PROTECTION like gloves, face mask etc. You want to poison the pests, not YOURSELF!

Fungal and bacterial infections will disfigure or even kill your plants, so how to avoid this?

Above all hygiene and cleanliness. Don't leave dead and decaying material lying around, spores of fungi and bacteria are always present in the atmosphere and will thrive if given the right conditions.

These conditions are poor air circulation, high humidity and somewhere to breed i.e. dead and decaying plant material. Regular spraying of your plants with fungicides and attention to hygiene will go a long way to preventing these problems. There are many fungicides on the market; I use Mancozeb, Agrifos (phosphoric acid) and various others, I have recently heard of a product called "HOWZAT", which is supposed to be very good but I will try when I get some.

DO'S and DON'TS

- Do label all your plants with their correct names.
- Do use the same potting mix for all your plants
- Do clean and sterilize your pots before re using them.
- Do clean and sterilize your tools before re using them.
- Do keep your floor clean, remove dead leaves and flowers.
- Do fertilize regularly.
- Do water by hand.
- Do use low nitrogen fertilizer.
- Do avoid using copper based fungicides, Native dendrobiums don't like it.
- Don't let your plants get too dry.
- Don't let your plants stay too wet.
- Don't grow your orchids in the dark, give them plenty of light.

Dendrobium speciosum var. *grandiflorum* 'Katrina' AD/ANOS-2010

Bill Dobson

As some of you may be aware probably my favourite orchid is *Dendrobium speciosum* and all its varieties. I have gone up and down the east coast of Australia looking at these in situ. It's hard not to appreciate this as one of the world's best orchids, particularly when standing in front of a plant in the wild in full flower.

Approximately 10 years ago I was at the *Dendrobium Speciosum* Spectacular at Kempsey and couldn't help but pick up some of Ted Walmsley's advanced seedlings. In particular some grandiflorum Beranghi Gold x Creek Aureum, for myself and some for my mate Mick Korzenowski. I even backed this up the following year with some more, as Ted was making some room, as you have to for more advanced plants, and as they say 'you can't keep them all'.

Now knowing a bit about the plants helps when you are looking at the parents to have an idea about their progeny. I was looking for good shaped grandiflorums, but with colour, although this was secondary and anyway up till a few years ago about the only breeding that had been done was by Ted Gregory.

Den. speciosum var. *grandiflorum* 'Beranghi Gold'

This is a bush plant collected from Mt Larcom just north of Gladstone in QLD. A strange rocky outcrop within a stone's throw of the Pacific Ocean. Plants from here have two features one good and one bad.

The Good; COLOUR here they have it in spades GOLD to ORANGE like a carrot.

The BAD; SHAPE sounds too good to be true, and it is. Trouble is most of the plants reflex badly and the lateral sepals kick in to touch and almost cross.

Den. speciosum var. *grandiflorum* 'Creek Aureum'

This is a bush collected plant from Kroombit Tops approximately 70 km west-south-west of Gladstone and from an altitude of 600-800m. Plants here are generally good shape but as in all things in nature you would have to see thousands in flower to pick a handful if you are lucky. However shape is much, much better than the Mt Larcom variety.

In the early 1990's Ted Walmsley and Tony Blewitt had travelled to Queensland to see some of the *Den. speciosum* varieties such as *Den. speciosum* var. *capricornicum*, *Den. speciosum* var. *curvicaule, and Den. speciosum* var. *grandiflorum* and since then they have been line breeding and intervarietal breeding as well and this is one of the results.

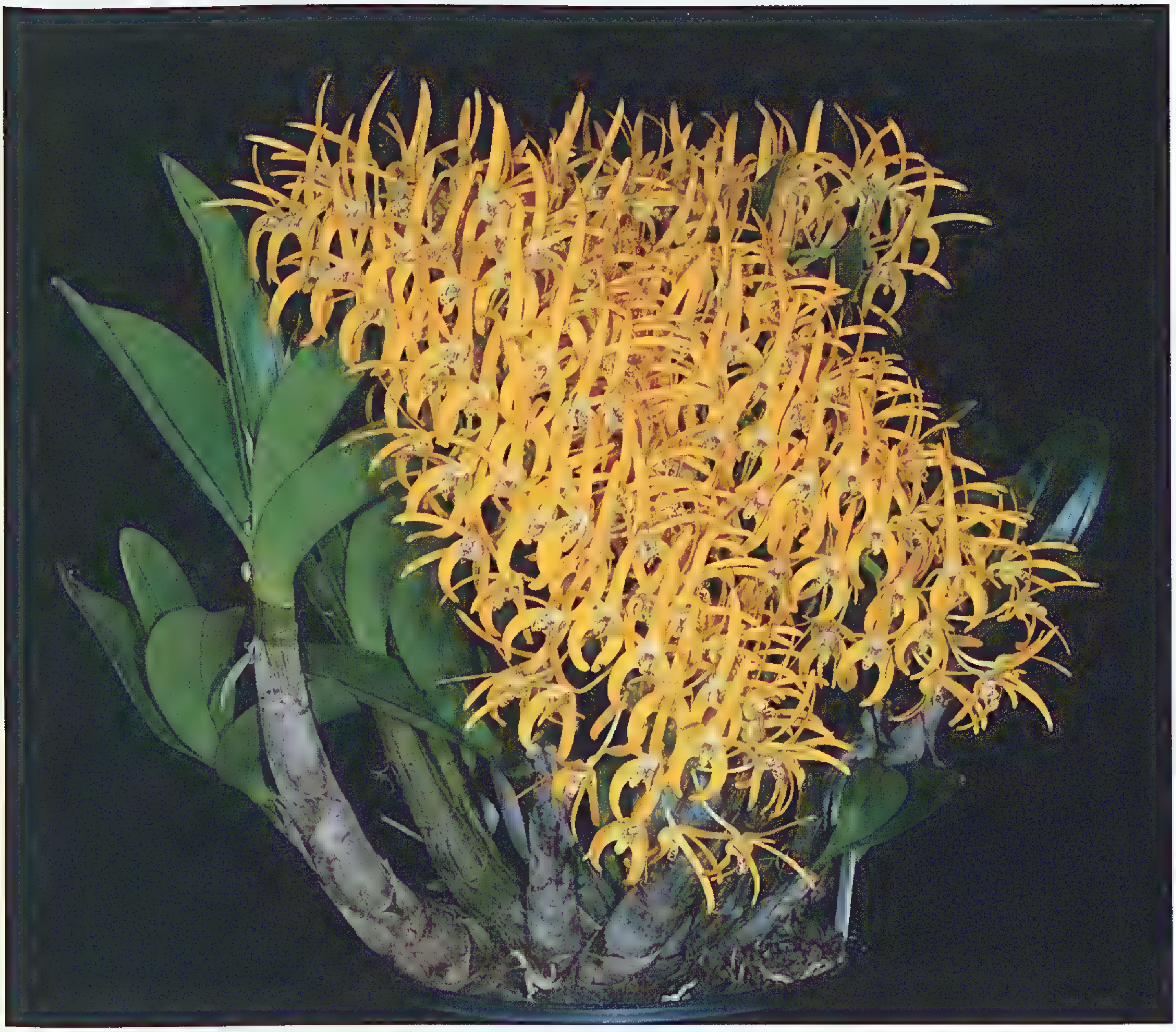
Dendrobium speciosum var. *grandiflorum* 'Katrina' was one of the seedling that Mick had although it was not the first to flower there were a couple of others that had a tendency to more orange than gold and when I returned to Ted's at Kempsey the following year I suggested that he flower the rest before putting them on the sales bench. However this is easier said than done as they can take a number of years before they flower and in the mean time are getting bigger and bigger. These plants are very robust and very floriferous with 80-100 flowers on a mature inflorescence, and flowers between 70-90mm.

This was also it's first flowering and what a flowering it was. If you saw a picture of the plant then you might be tempted to say the colour could not be that good but when the plant is sitting in between other gold grandiflorum and cream curvicaule plants on the same bench as was the case in ANOS Warringah Group's Spring Show in 2010 (back cover) it hit you in the face. Bar for the fact it had a few damaged flowers if would have received a quality award as well. However it was awarded an AD for its outstanding colour which it justly deserved.

So keep a lookout for *Dendrobium speciosum* var. *grandiflorum* seedlings. I know that Gerry Walsh, The Rock Lilly Man, has some and we are growing some of these on now and they are moving along very well. Can't wait to see them in flower as some of the parents, including Katrina, are even more impressive.

Perhaps I will see you at the show at Kempsey this year poring over the sales bench.

Good Growing



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Shows - Events - Advices

All dates 2015 unless noted—States are colour coded: QLD, NSW, VIC

- **ANOS Newcastle Autumn Show**

Saturday 2nd May—Sunday 3rd May
Judging at 8:30 am Sat.
Elermore Community Centre
129 Croudace Rd, Elermore Vale NSW 2287

- **ANOS Macarthur Group**

2015 Autumn Orchid Show
Saturday 9 May—set-up 7 am
Judging at 9 am.
Rosemeadow Market Place, Copperfield Drive, Rosemeadow NSW

- **Tinonee Orchid Nursery**

Tinonee Open Day Show
Sunday 5th July
Judging at 9 am
Tinonee Orchid Nursery, 768 Tinonee Rd, Tinonee NSW (near Taree)

- **ANOS Central Coast**

Central Coast Spring Show
Friday—Sunday 21-23 August
Judging at 7 pm Thurs 20 August
Narara Valley Nursery, 2 Manns Rd, Narara NSW

- **ANOS Kabi Spring Show**

Saturday—Sunday 22—23 August
Bald Hills State School Hall, 2156 Gympie Rd, Bald Hills Qld.

- **ANOS Newcastle Spring Show**

Saturday—Sunday 29—30 August
Judging Saturday at 8:30 am
Windale—Gateshead Bowling Club, 2A Lake St, Windale NSW 2306

- **ANOS Mid North Coast Show**

Includes the Speciosum Spectacular
Saturday—Sunday 5-6 September
57 Spooners Avenue
Greenhill via Kempsey NSW

- **ANOS Illawarra Spring Show**

Saturday—Sunday, 5-6 Sept
Judging at 7:30 pm Friday
Old Courthouse, Cliff Road, Wollongong NSW 2500

- **ANOS Warringah Spring Show**

Saturday—Sunday 12-13 September
Judging at 8 pm Friday
Forestville Memorial Hall, Starkey St, Forestville NSW 2087

- **ANOS Sydney Group Spring Show**

Saturday—Sunday 19-20 September
Judging 9 am Saturday
Eden Gardens Nursery, 301-307 Lane Cove Rd, North Ryde NSW

- **ANOS Macarthur Spring Show**

Saturday 26th September
Judging at 9 am
Narellan Town Centre (near Coles), Camden Valley Way, Narellan NSW 2567

- **ANOS Melbourne Suburbs Spring Show**

Sat. 26th September
935 Mt Dandenong Tourist Rd, Montrose (Mel 52 D7)

- **ANOS Illawarra Sarc Show**

Saturday—Sunday 17-18 October
Judging Friday 7:30 pm
Old Courthouse, Cliff Road, Wollongong NSW 2500

- **ANOS Central Coast Sarc Show**

Saturday—Sunday 17-18 October
Judging Saturday 9 am
Penrose Nursery and Aquarium, 224 The Entrance Rd, Erina NSW 2250

- **ANOS Sydney Group Sarc Show**

Saturday 17 October
Judging 9 am
Community Church, 41-43 Eaton Rd, West Pennant Hills NSW

- **ANOS Melbourne Suburbs Late Spring Show**

Sat. 17th October
935 Mt Dandenong Tourist Rd, Montrose (Mel 52 D7)

- **ANOS Newcastle Sarc Show**

Saturday—Sunday 17-18 October
Judging Saturday 8:30 am
Windale—Gateshead Bowling Club, 2A Lake St, Windale NSW 2306

- **ANOS Macarthur Late Spring Show**

Saturday 24th October
Judging at 9 am
Narellan Town Centre (near Coles), Camden Valley Way, Narellan NSW 2567

DIRECTORY OF A.N.O.S. GROUPS (and Associated Societies)

NEW SOUTH WALES

- **ANOS Central Coast**: PO Box 3010, Erina NSW 2250 - (02) 4340 5157

2nd Wednesday each month, 8pm. Narara Community Centre, 2 Pandala Rd, Narara 2250

- **ANOS Far North Coast Inc**: PO Box 949, Ballina NSW 2478 - (02) 6686 6303

3rd Saturday each month (except December), 2pm. C.W.A. Room, River Street, Ballina.

- **ANOS Illawarra**: 2 Wilford St, Corrimal NSW 2518 - (02) 4284 8308

2nd Tuesday each month, 7pm. Old Court House, Wollongong.

- **ANOS Macarthur and District**: 43 Strickland Cres, Ashcroft NSW 2168 - (02) 4681 8589

3rd Thursday each month, 8pm. Birriwa Community Hall, Fitzpatrick Rd, Mt Annan.

- **ANOS Mid-North Coast**: 69 The Lakes Way, Forster NSW 2428 - (02) 6554 9733.

Last Sunday each month, 12 noon, followed by BBQ. Contact secretary for location—Taree or Wauchope.

- **ANOS Newcastle**: PO Box 4021, Rathmines NSW 2283 - (02) 4975 3729.

4th Thursday each month, 7.30pm. Elermore Vale Community Centre, 129 Croudace St, Elermore Vale

- **ANOS Sydney Inc.**: 22 Rabaul Ave, Whalan NSW 2770 - (02) 8824 6338.

3rd Friday each month, 8pm. Senior Citizens Hall, B.H. Community Centre, Conie Ave, Baulkham Hills

- **ANOS Warringah Inc.**: PO Box 421, Forestville NSW 2087 - (02) 9981 2525

3rd Tuesday each month, 8pm. Community Hall, Starkey St, Forestville.

QUEENSLAND

- **ANOS Beenleigh Inc.**: PO Box 1130, Beenleigh QLD 4207 - (07) 3805 1973

1st Thursday each month, 7.30pm. Showground Hall, James St, Beenleigh.

- **ANOS Kabi Inc.**: PO Box 424, Aspley QLD 4034 - (07) 3359 5752

2nd Tuesday all months except January, 7.30pm. Bald Hills Memorial Hall, 2126 Gympie Rd, Bald Hills.

- **ANOS Mackay and District Inc.**: PO Box 138, Koumala QLD 4738 - (07) 4950 1065

2nd Thursday each month, Andergrove Community Centre, Celeber Drive, Andergrove.

- **ANOS Townsville Inc.**: 92 Curie St, Wulguru QLD 4811 - (07) 4778 4311

1st Tuesday each month (except January), 8pm. Townsville Orchid Society Hall, Joe Kirwan Park, cnr Bamford Lane and Charles St, Townsville.

- **Native Orchid Society of Toowoomba Inc.**: 106 Umbiram Rd, Wyreema QLD 4352.

1st Friday each month, 7.30pm. Lutheran Church Hall, cnr West and Alderley Sts, Toowoomba.

SOUTH AUSTRALIA

- **Native Orchid Society of South Australia Inc.**: PO Box 565 Unley SA 5061 - (08) 8261 1550

4th Tuesday each month, 8pm. St Matthew's Hall, 67 Bridge St, Kensington

VICTORIA

- **ANOS Geelong Inc.**: 2 Cooper St, Melton South VIC 3338 - (03) 9743 6040.

2nd Wednesday each month, 7.30pm, Uniting Church Hall, Yarra St, Geelong.

- **ANOS Victoria Inc.**: PO Box 308, Boronia VIC 3155 - (03) 9387-2771.

1st Friday each month, 8pm. Toorak Uniting Church Hall, 603 Toorak Rd, Toorak (Melways 58 K4)

- **ANOS Melbourne Suburbs Group:** PO Box 169, Bayswater VIC 3153 - 0419 720 355.

4th Wednesday each month, 7.30pm. Montrose Primary School, Leith Rd, Montrose 3765 (Melways 52 D7)

WESTERN AUSTRALIA

- **ANOS Western Australia Inc.**: 27 Maidment Parade, Dalyellup WA 6230 - 0419 901 335.

2nd Monday each month, 8pm. Wilson Community Hall, Braibrise Rd, Wilson.

NEW ZEALAND

- **ANOS New Zealand Native Orchid Group**: 42 Titiro Moanna Rd, Korokoro, Lower Hutt 5012

The Australasian Native Orchid Society Inc.
Products Available

ANOS Awards CD

- $20 plus postage
- CD containing award pictures and fact sheets for each award made by ANOS.

A Checklist of Australian Native Orchid Hybrids—9th Edition (2010)

- Hybrid checklist of all Australian Native Orchid Hybrids

Watercolour Drawings

Superb colour prints of J.J. Riley's drawings of Australian Orchids are now available in 3 sets of 8 different species each. **Each set is $15 plus postage**

- **Set 1**

Pterostylis maxima
Dipodium variegatum
Pterostylis daintreana
Pterostylis grandiflora
Cryptostylis erecta
Genoplesium filiforme
Diuris lanceolata
Rimacola elliptica

- **Set 2**

Pterostylis sanguinea
Pterostylis depauperata
Acianthus caudatus
Caladenia concinna
Chiloglottis truncata
Dendrobium kingianum
Sarcochilus australis
Dendrobium striolatum

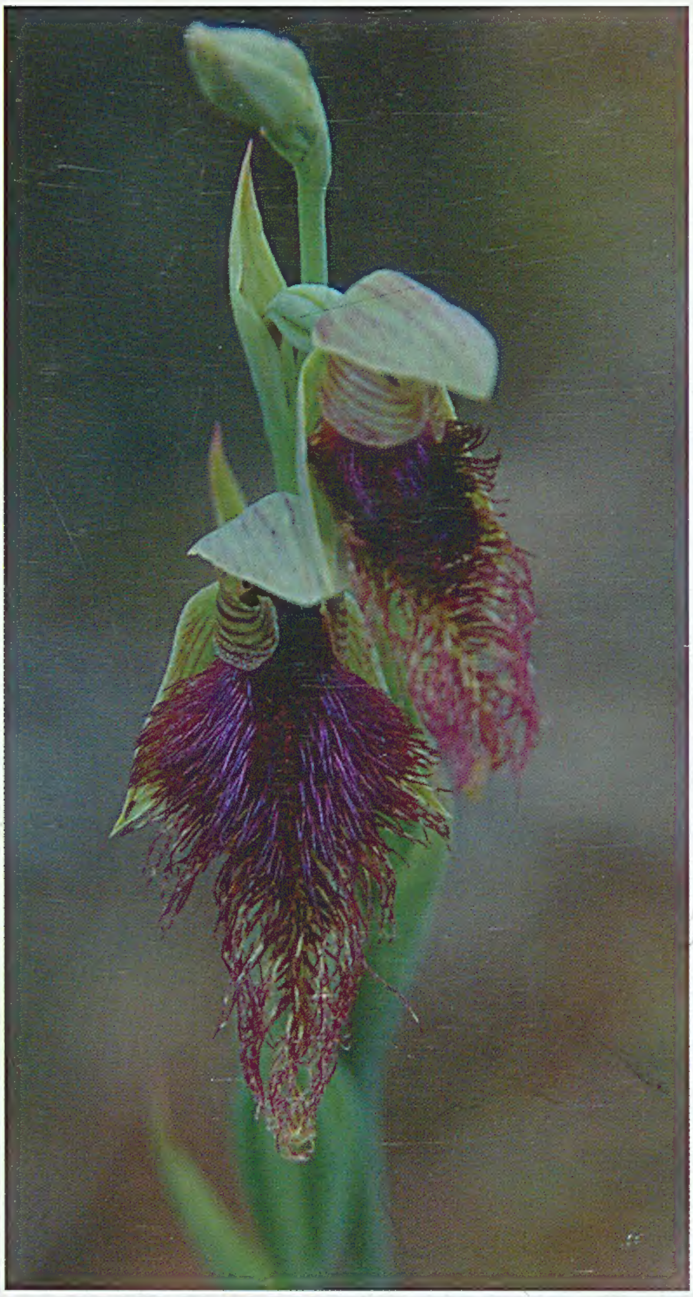
- **Set 3**

Dendrobium moorei
Lyperanthus nigricans
Dendrobium bowmanii
Eriochilus cucullatus
Pterostylis vittata
Sarcochilus ceciliae
Sarcochilus falcatus
Cymbidium canaliculatum

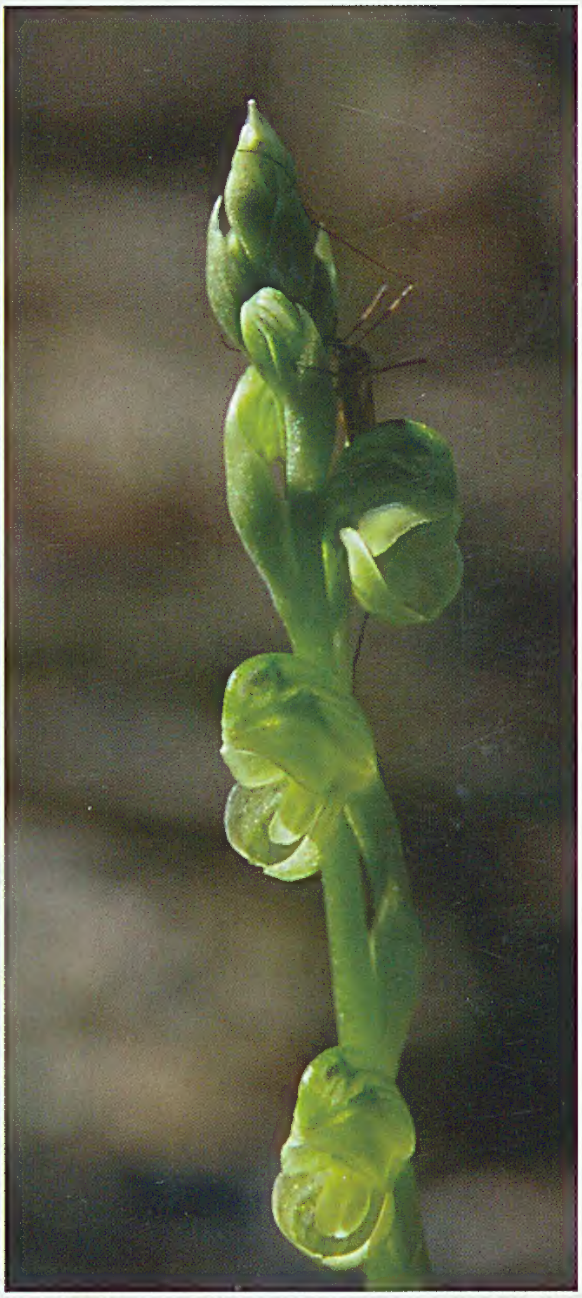
Contact the treasurer with regard to availability of these items and in order to arrange payment.

Meeting Planner: Each row is a week in the month—first at top, fourth at bottom. For instance, Macarthur and Districts ANOS meets on the 3rd Thursday each month.

Weekend	Monday	Tuesday	Wednesday	Thursday	Friday
1st Week		Townsville		Beenleigh	Toowoomba Victoria
2nd Week	Western Australia	Illawarra Kabi	Central Coast Geelong	Mackay & District	
Far North Coast (Sat)	*3rd Week*	Warringah		Macarthur & District	Sydney
Mid-North Coast (Sun)	*4th Week*	South Australia	Melbourne suburbs	Newcastle	



Calochilus robertsonii, The Rock



Pterostylis mutica, The Rock

Den. speciosum benching at ANOS Warringah Group's spring show in 2010 with the orange *D. speciosum* var. *grandiflorum* 'Katrina' clearly visible among its colleagues. More on p 138.